

**FROM TINKERERS TO GODS: THE ELECTRIC GUITAR AND THE SOCIAL
CONSTRUCTION OF GENDER**

by

Monique Mignon Bourdage

A.A., Seattle Central Community College, 2000

B.A., Metropolitan State College of Denver, 2003

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This thesis for the Master's of Social Sciences

degree by

Monique Mignon Bourdage

has been approved

by



David Hildebrand



Margaret Woodhull



Pamela Laird

November 27, 2007
Date

Bourdage, Monique Mignon (M.S.S.)

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Thesis directed by Assistant Professor David L. Hildebrand

ABSTRACT

Men have historically dominated as innovators and players of the guitar and continue to dominate these fields because the design and use of the guitar and the electric guitar, in particular, have been historically constructed to exclude women. The history of the electric guitar illustrates that a technology can neither be separated from the cultural values prevalent at the time of its creation nor those cultural values later ascribed to it. Although some scholars have located the instrument's inaccessibility to women in its design, such arguments ignore the institutional reasons for the lack of great female electric guitarists.

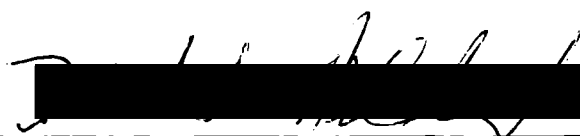
Many innovators of the electric guitar developed their skills within the culture of tinkering related to radio and automobile technologies. Prior to the advent of radios and electric guitars, music appreciation had been widely considered a feminine pastime. However, early radios' need to be constructed and the guitar's harnessing of electricity helped legitimate music as a masculine pastime. Cultural values, which held that such technological pursuits were masculine pursuits, also excluded women from gaining the practical knowledge and respect necessary to make innovations in

the instrument's design and use. The mythologies of rock music, which have roots in the folklore of both the Greeks and the blues, also pose a barrier to women becoming electric guitarists. Both traditions uphold aggressive male heroes, and electric guitar virtuosos are often assigned a supernatural status, either through allegations of deals with the devil or by being likened to gods.

The same barriers that prevent women from succeeding in other male-dominated fields also apply to the electric guitar, such as a scarcity of role models, a lack of access to education, and the masculinization of prestigious technologies. Despite allusions to rebellion, rock 'n' roll often promotes traditional gender roles, which relegate women to fan or groupie. Efforts to break down these barriers have included women's music festivals, punk rock, riot grrrl, and rock camps for girls, which have created and continue to create space in which women can experience the empowerment that comes with creating music while also supporting a multiplicity of feminine perspectives.

This abstract accurately represents the content of the candidate's thesis. I recommend its publication.

Signed

A handwritten signature in dark ink, appearing to read "David L. Hildebrand", is written over a solid black rectangular redaction box.

David L. Hildebrand

DEDICATION

To Chris Conner. Although I could have done it without you, I wouldn't have had as much fun in the process. Your support and enthusiasm for my work is invaluable. Thanks for believing even when I had my doubts.

And to Maggie Brown, Christy Liddy, Katie Rothery, and all the other girls who rock, with or without guitars.

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CHAPTER 1

INTRODUCTION

In the United States during the early twentieth century, men dominated as innovators and players of the guitar. Men continue to dominate these fields because the design and use of the guitar and the electric guitar, in particular, have been historically constructed to exclude women. While the physical design of the instrument does play a role in the fact that few women have ever been honored for their ability to play the electric guitar, the relationship between the electric guitar and the cultural values it has come to embody provides a deeper explanation for the virtual absence of famous female players. The history of the electric guitar illustrates that a technology can neither be separated from the cultural values prevalent at the time of its creation nor those cultural values later ascribed to the technology.

The electrification of the guitar limited women's access to the guitar in many ways. First of all, the drive to amplify and electrify the guitar took place within a culture of tinkering related to radio and automobile technologies. Cultural values, which held that such technological pursuits were masculine pursuits, also excluded women from gaining the practical knowledge and respect necessary to make innovations in the design and playing of the instrument. In the United States of the early twentieth century, economic and social forces acted to further distance women

from technological pursuits by reinforcing the idea that men are active producers and women are passive consumers of technologies. Moreover, mankind's ability to harness electricity was still a relatively new feat in the 1930s, and physicists, mediums, and guitar manufacturers were among the many who ascribed supernatural powers to electric technologies. The ascription of these powers to electric technologies, and the guitar in particular, within a culture whose vast majority worships a male deity served to further exclude women from the realm of the electric guitar, as fans came to identify players who had mastered the instrument as gods.

The advent of rock 'n' roll in the 1950s placed the electric guitar firmly in the center of American popular culture. Over the last five decades, audiences and critics alike have come to emphasize volume, speed, and power as fundamental components of rock 'n' roll. Those Americans who first embraced rock 'n' roll did so at a time prior to the civil rights and women's movements. At the time that audiences were embracing the electric guitar as a vital element in popular culture, the dominant values of the society still held that little girls were to be seen and not heard, and such values served to reinforce the idea that the electric guitar is exclusively masculine territory.

While the term "rock 'n' roll" comes from a colloquial reference to sexual intercourse, in the 1960s players like Jimi Hendrix infused the electric guitar with an even greater degree of sexual symbolism. This sexual symbolism identified the electric guitar as an extension of the male body, or, as scholar of music and American

studies Steve Waksman calls it, a “technophallus.”¹ Evidence of the use of the electric guitar as technophallus includes the fact that it has become commonplace in rock ‘n’ roll for guitarists to hold their instruments low-slung so they rest below the waist as well as the development of sexually explicit vernacular terms to describe the playing of the electric guitar. Playing and describing the electric guitar in ways that emphasize male sexuality further alienates women from the technology.

Early in the twenty-first century, women are still striving for recognition as players and designers of the electric guitar. A quick glance through *Guitar Player* will demonstrate that, although representations of women in the magazine have improved over the four decades since its inception, women, especially as electric guitarists, are severely underrepresented within its pages. Although many books have been published on female musicians, the fact remains that there have been no great women guitarists. This is due to institutional factors such as a lack of access to education, a scarcity of female role models, traditional constructions of gender, and the masculinization of technology in general and audio technologies in particular.

While women have not been completely denied access to the electric guitar, throughout the instrument’s history, critics and fans alike have largely treated female players as novelties. On the other hand, punk rock, riot grrrl, and rock camps for girls have created spaces in which women can make music while confronting the cultural

¹ Steve Waksman, *Instruments of Desire: The Electric Guitar and the Shaping of Musical Experience* (Cambridge, MA: Harvard University Press, 1999), 188.

values that have long defined the electric guitar as masculine territory. As more girls and women pick up electric guitars, the likelihood that future generations of aspiring female musicians will have a variety of role models from which to choose increases. Within the last several years, a more visible attempt to encourage women to play the guitar has been the introduction of electric models marketed specifically towards women by both major and minor guitar manufacturers. Although the availability of these instruments may entice more girls and women to begin playing electric guitars, such marketing reinforces the idea that the inaccessibility of such technologies to women is due to the instrument's design rather than the cultural values ascribed to it.

CHAPTER 2

HISTORY OF THE DEVELOPMENT OF THE ELECTRIC GUITAR

Like other technologies, the history of the development of the electric guitar is long and complex. The modern electric guitar is not the result of a single inventor or single design innovation. While amateurs and professionals alike sought to solve problems concerning the amplification and electrification of the guitar, this paper focuses on the contributions of a select group of innovators and manufacturing companies that made innovations that led to the creation of commercially viable and successful electric guitars. Since the guitar existed for hundreds of years before it was electrified, a brief history of the instrument's design and its introduction to North America is necessary in order to fully understand the impact of its electrification.

Ancestry and Introduction

The earliest surviving ancestors of the guitar date from the fourteenth century. By the end of the fifteenth century, the guitar appeared as a distinct instrument from its ancestors such as the lute. Beginning in the mid-eighteenth century, luthiers slowly made innovations to the instrument that resulted in its now-familiar shape.¹ Luthiers

¹ Although deemed "true" guitars by historians such as Terry Burrows, these early instruments differed markedly from their modern counterparts. The frets of the

made many more innovations during the nineteenth century, and Antonio de Torres Jurado was a key figure in the design revolution. Torres was born in Almeria, Spain, in 1817 and worked as a carpenter until he moved to Granada in 1850 to study under a luthier named Jose Pernas. Torres elongated the body of the guitar and domed the lower bout, giving the instrument its familiar hourglass curves. He also experimented with lighter and thinner woods to make the instrument's top and strengthened the body by creating a support system consisting of seven fan struts. In addition to adding strength, Torres' strut system increased the bass response of the instrument.²

Explorers and missionaries introduced the guitar to the Americas. Spanish missionaries brought guitars with them and taught the instrument to Native Americans. West Africans brought to the Americas as slaves were also familiar with the guitar. Portuguese mariners had introduced variants of the guitar to Africa as early as the fifteenth century, and West Africans had also become familiar with the instruments of the Moors living north of the Sahara Desert. While slave owners usually forbid slaves from playing tribal drums, many slaves were encouraged to

instrument were not fixed but were determined by the musician who wrapped gut around the instrument's neck. Additionally, strings were grouped into pairs, known as courses, rather than tuned to individual notes. Later innovations included fixing the frets to the neck, replacing courses with single strings, and the adoption of the modern tuning system. Terry Burrows, *Guitar: A Celebration of the World's Finest Guitars* (London: Carlton Books Limited, 2003), 6-7.

² Ibid., 30-31.

make and play stringed instruments.³ Portuguese mariners were also responsible for the introduction of ukuleles to the Hawaiian Islands.⁴ By 1830, Hawaiians had employed many Spanish and Mexican cowboys to tend the herds on the cattle ranches they had begun developing in the eighteenth century.⁵ When these cowboys came to the Islands, they brought their guitars with them.⁶ The Hawaiian steel guitar played an important role in the history of the development of the electric guitar.

C.F. Martin

During the nineteenth century, C. F. Martin made important innovations to the guitar while working as a luthier in the United States. Martin was born in Germany in 1796 and, at the age of fifteen, was apprenticed to Johann Georg Stauffer, a well-known Viennese luthier. Working with Italian guitar virtuoso, Luigi Legnani, Stauffer developed an instrument with a headstock curved in the shape of a “Persian slipper” that featured all six tuning pegs arranged along one side.⁷ The influence of this design is apparent in Martin’s own guitars and in many electric models that

³ Frederic V. Grunfeld, *The Art and Times of the Guitar: An Illustrated History of Guitars and Guitarists* (Toronto: MacMillan Company, 1969), 229, 242.

⁴ “The State of Guitar in Hawaii,” *Guitar Player*, April 1976, 12.

⁵ Keith Haugen, “Slack Key Guitar,” *Guitar Player*, April 1976, 14+.

⁶ “The State of Guitar in Hawaii,” 12.

⁷ Burrows, *Guitar*, 22, 29.

would follow over one hundred years later. Although Martin's father, John Georg Martin, had begun making guitars when C. F. Martin was a child, the senior Martin was trained as a cabinetmaker. That cabinetmakers had begun making musical instruments upset the local guild of violinmakers, and many guitar makers immigrated to the United States to escape the rivalry. C. F. Martin was one of these guitar makers; he and his family moved to New York in 1833.⁸ There he started a music store with a small guitar workshop, which he operated until moving to Nazareth, Pennsylvania, in 1839. In addition to adopting the single-sided headstock of Stauffer, Martin also used steel strings on his guitars, an innovation which would "give birth to the steel-string folk tradition" and prove invaluable to the instrument's electrification.⁹ Steel was a louder, stronger alternative to the gut with which luthiers strung instruments until the late nineteenth century.¹⁰ Martin also developed a system of "X-bracing," as opposed to Torres' fan struts, to provide greater structural support for the guitar's body.¹¹

⁸ Ken Achard, *The History and the Development of the American Guitar* (Westport, CT: The Bold Strummer, Ltd., 1990), 2.

⁹ Burrows, *Guitar*, 27, 29.

¹⁰ Nick Freeth and Charles Alexander, *The Electric Guitar* (Philadelphia: Courage Books, 1999), 13.

¹¹ Monica Smith and Gary Sturm, curators, "From Frying Pan to Flying V: The Rise of the Electric Guitar", National Museum of American History in collaboration with the Smithsonian Institution and the Lemelson Center for the Study of Invention and

Orville Gibson

Orville Gibson was another luthier working in the United States who would make important contributions to the design of the guitar, and the company bearing his name would eventually become an indispensable part of the drive to amplify and electrify the guitar. Gibson, the son of a British immigrant, was dedicated to fine craftsmanship, and his most important contributions concerned the shape of the guitar. In the 1880s, Gibson began applying techniques used in violin making to mandolins and guitars. Rather than featuring the flat top of traditional guitars, his instruments, known as archtops, featured curved tops.¹² While the Gibson Corporation would continue to garner attention for its archtop guitars and mandolins, it would not remain as forward-thinking after Gibson's death in 1918.¹³

Early Tinkerers

Up until about 1890, only traditionally trained luthiers and other skilled woodworkers were responsible for major design innovations to the guitar. The drive to electrify the guitar, however, attracted innovators from a variety of backgrounds.

Innovation, <http://invention.smithsonian.org/centerpieces/guitars> (accessed February 20, 2006).

¹² Freeth and Alexander, *The Electric Guitar*, 7, 13, 34.

¹³ Gibson Guitar Corporation, "The Lloyd Loar Era," Folks; <http://www.gibson.com/folks/history/early/early2.html> (accessed February 20, 2006).

Although instrument makers from nontraditional backgrounds would not greatly impact the guitar market until 1931, the transition of power in the industry from luthiers to tinkerers is foreshadowed by the inventors working between 1890 and 1928. The next section examines the pioneering, though not always practical or successful, work of George Breed, Lloyd Loar, and the Dopyera brothers.

The earliest patent concerning the application of electricity to the guitar was issued in 1890 to George Breed, a U.S. naval officer. The diagrams that accompany Breed's patent application show its application to the piano and the guitar, and Breed claims in the text of the patent that the same innovation can be applied to other stringed instruments.¹⁴ Although his innovations used electricity and magnetism to produce (but not amplify) sound and foreshadowed innovations to come, Breed's design ultimately proved to be impractical.¹⁵ His design featured a magnet fitted inside the guitar's body.¹⁶ In *The Electric Guitar*, Nick Freeth and Charles Alexander describe the operation of Breed's instrument as follows:

¹⁴ *Method of and Apparatus for Producing Musical Sounds by Electricity*, by George Breed. (1890, September 2). Patent No. 435,679. [Online]. Available from <<http://www.pat2pdf.org>>

¹⁵ Rather than transmit electrical signals to an amplifier, Breed's innovation, like other early attempts, used a standard acoustic body to reflect the instrument's sound. Ibid.; Freeth and Alexander, *The Electric Guitar*, 16.

¹⁶ *Method of and Apparatus for Producing Musical Sounds by Electricity*, by George Breed.

Its strings pass between the poles of the magnet and across a metal bridge, which is wired to a rough-edged conducting wheel housed in a box at the tailpiece. This wheel, turned by a small clockwork motor, is connected via a contact-spring, to a battery. The other side of the circuit comprises an electrical link between the battery and the instrument's frets, which are wired together.¹⁷

With this design, the player completes the circuit by pressing a string against a fret.¹⁸ In other words, while Breed's design did use electricity to produce sound, it also required that the instrument be played in an entirely new way. From the patent description, the instrument appears to be a forebear to the Chapman Stick, a ten-stringed instrument that enables players to simultaneously play melody and bass parts by tapping the strings against the frets. Although Breed's instrument possessed the standard six strings, he did recommend dividing the strings between two circuits so that the bass and treble could be controlled independently.¹⁹

Lloyd Loar, on the other hand, aimed to maintain the traditional shape and method of playing the guitar. He had a greater amount of formal education than the other well-known innovators who worked on amplifying and electrifying the guitar. Loar had a master's degree in music and was also an acoustics engineer and a classical mandolinist. In 1919, the Gibson Corporation hired Loar and placed him in

¹⁷ Freeth and Alexander, *The Electric Guitar*, 14.

¹⁸ Ibid.

¹⁹ *Method of and Apparatus for Producing Musical Sounds by Electricity*, by George Breed.

charge of product development.²⁰ Among his greatest contributions to the Gibson product line were the F-5 mandolin and L-5 guitar.²¹ These instruments maintained Orville Gibson's dedication to fine craftsmanship while paving the way for increased interest in the commercial production of louder guitars. Like Orville Gibson, Loar looked to violin making for inspiration. He replaced the traditional round soundhole of the guitar with two f-holes. His design also featured a built-in "Virzitone" sound producer, which along with the f-holes gave the instrument a strong, warm sound.²² While the release of the L-5 in 1922 created a greater demand for guitars, the Gibson Corporation did not readily embrace Loar's other innovations.²³ By 1924, Loar had developed an electric viola and an electric bass. When the company refused to market his new instruments, Loar resigned and continued to work on his developments.²⁴

Loar concentrated much of his efforts in pickup design. Pickups translate vibrations into electrical signals that can then be transmitted through a speaker or headphones. Today's guitars use electromagnetic pickups that directly translate

²⁰ Achard, *The History and Development of the American Guitar*, 8; Gibson Guitar Corporation, "The Lloyd Loar Era."

²¹ Gibson Guitar Corporation, "The Lloyd Loar Era."

²² Burrows, *Guitar*, 34.

²³ Ibid.; Gibson Guitar Corporation, "The Lloyd Loar Era."

²⁴ Freeth and Alexander, *The Electric Guitar*, 18.

string vibrations, but Loar's guitars incorporated electrostatic pickups, which sensed vibrations in the instrument's soundboard.²⁵ This simple description, however, does not provide an accurate representation of Loar's pioneering work.

On January 27, 1934, Loar filed a patent application that describes an instrument that uses the vibration of the string bridge "to vibrate both the belly sounding board and the back sounding board of the sound box."²⁶ Loar's patent application describes an early acoustic-electric instrument. That is, the player can choose whether the sound will be produced electrically with the strings' vibrations translated to an amplifier and loudspeaker, mechanically with the strings' vibrations directed towards the guitar's sounding boards, or whether electrical and mechanical amplification will be used simultaneously. This design also featured innovations that allowed for adjustment of the instrument's tone by adjusting string pressure on the pickup armature.²⁷

According to a patent application Loar filed on July 31, 1933, however, he did experiment with replacing the traditional hollow bodies of stringed instruments so

²⁵ Monica Smith and Gary Sturm, curators, "From Frying Pan to Flying V: The Rise of the Electric Guitar."

²⁶ *Stringed Musical Instrument*, by Lloyd A. Loar. (1935, December 31). Patent No. 2,025,875. [Online]. Available from <<http://www.pat2pdf.org>>

²⁷ Ibid.

that they would no longer act “as resonant sound-amplifying chambers.”²⁸ In other words, Loar was experimenting with the creation of solid body instruments. In his patent application, Loar argues that his design will be perfect for practicing an instrument because the unamplified sounds of the guitar would be audible only to the person playing it. This innovation involved the use of an electromagnetic pickup to pick up string vibrations and translate them to headphones or an amplified loudspeaker system. Loar recommended the use of a foot pedal to control volume.²⁹

While later experimenters in solid body designs aimed to eliminate vibrations in the guitar’s body, Loar continued to experiment with electrostatic designs. In a patent application filed May 14, 1934, Loar describes a traditional hollow body guitar with internal improvements that work to maximize the degree of sound board sensitivity.³⁰ In 1933, Loar and some other former Gibson employees started the Vivi-Tone Company and began producing some of Loar’s designs.³¹ The company quickly failed due to a lack of market interest in Loar’s unconventional instruments.³²

²⁸ *Stringed Musical Instrument*, by Lloyd A. Loar. (1935, November 12). Patent No. 2,020,842. [Online]. Available from <<http://www.pat2pdf.org>>

²⁹ Ibid.

³⁰ *Stringed Musical Instrument*, by Lloyd A. Loar. (1935, November 12). Patent No. 2,020,557. [Online]. Available from <<http://www.pat2pdf.org>>

³¹ Freeth and Alexander, *The Electric Guitar*, 18; Achard, *The History and Development of the American Guitar*, 9.

The Dopyera brothers, Slovakian immigrants and the sons of a violinmaker, had greater commercial success with their amplified guitars.³³ In the 1920s, George Beauchamp, a steel guitar player, asked John Dopyera to build him a louder guitar.³⁴ John Dopyera was a violin repairman, who along with his brother Rudy, had patented improvements for the banjo.³⁵ Their first attempt for Beauchamp involved a guitar that had to sit on a stand and had a Victrola horn attached to it to amplify the sound. After this failure, John and Rudy Dopyera began experimenting with cone-like aluminum resonators. Their successful prototype had three cones placed inside a metal guitar body and attached to the bridge.³⁶ The resonators operated in ways similar to audio loudspeakers. String vibrations passed through the bridge, were transferred to the cones, and caused the cones to resonate. Although the resulting sound was more metallic and harsh than sound from traditional guitars, resonator guitars were the loudest available guitars at the time.³⁷

³² Achard, *The History and Development of the American Guitar*, 9.

³³ Ibid., 21; Gibson Guitar Corporation, "The Dobro Story," Original Acoustic Instruments, <http://www.gibson.com/products/oai/dobro/story.html> (accessed February 20, 2006).

³⁴ Rickenbacker International Corporation, "The Earliest Days of the Electric Guitar," Early History of Rickenbacker, http://www.rickenbacker.com/history_early.asp (accessed February 18, 2006).

³⁵ Ibid.; Gibson Guitar Corporation, "The Dobro Story."

³⁶ Rickenbacker International Corporation. "The Earliest Days of the Electric Guitar."

Pleased with the Dopyeras' work, Beauchamp secured \$12,000 from a millionaire cousin-in-law and formed a manufacturing company with the Dopyeras. The National Company's factory was located near Adolph Rickenbacker's tool and die shop, and National quickly hired Rickenbacker as an engineer.³⁸ National began releasing resonator guitars around 1927.³⁹ Displeased with National's management, John Dopyera left the company in 1928, but he and his brother, Louis, maintained stock in the company.⁴⁰ John Dopyera developed a guitar with a wooden body that used a single cone for amplification, and by late 1928, he was manufacturing these instruments under the name Dobro, which was short for Dopyera brothers.⁴¹ On June 29, 1929, Rudy Dopyera filed a patent application for improvements to single-cone resonator guitars. While Rudy Dopyera aimed for an improved metal resonator that would produce a sweeter tone and greater amplification, his designs and those of his brother still relied on the resonance of an instrument's hollow body.⁴² In response,

³⁷ Burrows, *Guitar*, 39.

³⁸ Rickenbacker International Corporation, "The Earliest Days of the Electric Guitar."

³⁹ The Gibson Guitar Corporation provides the 1927 date. On page 39 of *Guitar: A Celebration of the World's Finest Guitars*, however, Terry Burrows claims National released its resonator guitars beginning in 1926. Gibson Guitar Corporation, "The Dobro Story."

⁴⁰ Rickenbacker International Corporation, "The Earliest Days of the Electric Guitar."

⁴¹ Gibson Guitar Corporation, "The Dobro Story."

⁴² *Stringed Musical Instrument*, by Rudolph Dopyera. (1932, August 16). Patent No.

National began producing a single-cone resonator guitar with an aluminum body, and the two companies remained in dispute until merging in the early 1930s.⁴³ In the meantime, Louis Dopyera had gained financial control of National and fired Beauchamp and some other employees.⁴⁴

The First Electric Guitars

Beauchamp's sudden departure from National marks a pivotal point in the development of the electric guitar. From the 1930s through the 1950s, both amateurs and professionals attempted to design a practical and commercially viable electric guitar. In the beginning, practicality was the driving force behind the many guitar innovations that occurred in this time period. First of all, jazz was the most popular musical genre from the 1920s through most of the 1940s. As jazz bands grew into big bands, the guitar was unable to compete in terms of volume with the other instruments. Horn players often used megaphones to amplify their solos, which made

1,872,633. [Online]. Available from <<http://www.pat2pdf.org>>

⁴³ According to the Gibson Guitar Corporation, the merger took place in 1932, but Achard claims the merger occurred in 1934. Achard, *The History and Development of the American Guitar*, 22; Burrows, *Guitar*, 39; Gibson Guitar Corporation, "The Dobro Story."

⁴⁴ Rickenbacker International Corporation, "The Earliest Days of the Electric Guitar."

hearing the guitar even more difficult.⁴⁵ This meant that bandleaders relegated the guitar to a rhythm instrument, and guitarists were seldom recognized for their skillful playing or allowed to solo.⁴⁶ As was previously mentioned, the L-5 guitar Loar created for Gibson did offer a louder sound than other available guitars, and the demand for guitars soon increased with many banjo players deciding to change instruments.⁴⁷ The L-5 also featured a single cutaway to the upper bout.⁴⁸ Almost thirty years later, the cutaway design would become almost standard on electric models. By 1929, manufacturers were producing more guitars than any other fretted instrument.⁴⁹ In 1929, manufacturers were producing approximately 160,000 guitars, but by 1936, manufacturers were selling approximately 500,000 of them.⁵⁰ With such growing commercial interest in the guitar, it is not surprising that new companies and individuals began seeking to improve the instrument's design and sound.

⁴⁵ Joel A. Siegel and Jas Obrecht, "Eddie Durham: Charlie Christian's Mentor, Pioneer of the Amplified Guitar," *Guitar Player*, August 1979, 53+.

⁴⁶ Charlie Christian, "Guitarmen, Wake Up and Pluck! Wire for Sound; Let 'Em Hear You Play," *Guitar Player*, March 1982, 50. Published in *Down Beat*, July 10, 1969. First published in a Chicago news article, December 1, 1939.

⁴⁷ James P. Kraft, "Manufacturing: Expansion, Consolidation, and Decline," in *The Electric Guitar: A History of an American Icon*, ed. André Millard, (Baltimore: The Johns Hopkins University Press, 2004), 67-68.

⁴⁸ Burrows, *Guitar*, 35.

⁴⁹ Kraft, 67.

⁵⁰ Ibid.; "Frets in Minneapolis," *Time*, June 29, 1936, 66.

Beauchamp and two other former National employees were the first to produce a commercially available electric guitar. After his termination from National, Beauchamp enrolled in electronics courses and focused his efforts on experimenting with the electrification of the guitar. With the help of Paul Barth, Beauchamp developed a successful electromagnetic pickup comprised of two horseshoe magnets and a wire coil. The strings passed through the magnets and over the coil, which had six pole pieces. The pole pieces concentrated the magnetic field under each string and enabled the amplification of sound without reliance on the guitar as a resonating body. Barth and Beauchamp initially attempted to wind the coil with the motor from a washing machine, but they ultimately used a sewing machine motor for the job. Beauchamp recruited Harry Watson, who had also worked for National, to build a wooden body in which to place the pickup. Next, Beauchamp recruited Rickenbacker to help manufacture the new instrument. The men initially called their company the Ro-Pat-In Corporation, but within two years, they changed the company name to Electro String. Although Adolph Rickenbacker served as the president of the company, the choice to use the Rickenbacker name on the headstocks of their instruments was simply an attempt to cash in on the fame of Adolph's cousin Eddie, who had been a World War I flying ace.⁵¹

⁵¹ Rickenbacker International Corporation, "The Earliest Days of the Electric Guitar."

In 1931, Ro-Pat-In released the first commercially available electric guitar. It was a Hawaiian lap steel model rather than the Spanish style guitar whose shape Torres had established as standard for the instrument. The body of the guitar was small and round, which made the instrument's neck look extraordinarily long. Because of this unusual shape, people were more likely to know the instrument by its nickname, "The Frying Pan," than by its manufacturer or model name. While the prototype of the Frying Pan featured a wooden body, the commercial versions had bodies of cast aluminum.⁵²

Ro-Pat-In's decision to initially manufacture Hawaiian guitars is not unusual considering the popularity of Hawaiian music at the time of the Frying Pan's release. Hawaiian music was popular with American audiences from the 1910s until World War II. During this time period, country musicians also helped popularize the steel guitar sound and teachers created Hawaiian music schools to meet the increasing demand for steel guitar lessons.⁵³ Hawaiian and Spanish model guitars differ greatly in how they are played. The name steel guitar refers to the fact that the instrument is played by sliding a steel bar across the strings instead of fingering them. Lap steel guitars are played while lying flat in the guitarist's lap. Many historians attribute the

⁵² Ibid.

⁵³ Robert L. Stone, "A Brief History of the House of God Steel Guitar Tradition," Introduction to the program for the Sacred Steel Convention on March 30-31, 2001, <http://www.steelguitar.com/webpix/presspx/sacredsteel/RobertLStone/HistHseGdSGTrad.html> (accessed February 20, 2006).

invention of the steel guitar to Joseph Kekeku, who in 1885, at the age of eleven was experimenting with sound by sliding different objects across his guitar's strings. As a teenager, Kekeku used the school shop to develop the steel playing bar that is used today.⁵⁴ Hawaiian musicians brought the lap steel to the United States around 1900.⁵⁵

Thanks in part to Adolph Rickenbacker's background, the company continued making innovations in the field of electric instruments. Despite his investments in the manufacture of electric instruments, Rickenbacker maintained his tool and die shop, which continued to produce metal parts for resonator guitars manufactured by National and Dobro and also produced many objects made of Bakelite, such as toothbrushes and candleholders.⁵⁶ Bakelite is a hard, synthetic resin, and Rickenbacker had once worked with L.H. Baekeland, the Belgian-born inventor of Bakelite.⁵⁷

By the end of 1931, the company had also released a seven-string Hawaiian model and Spanish model that featured two f-holes.⁵⁸ The Spanish model had a

⁵⁴ John Ely, "Joseph Kekeku 1995 Hall of Fame Honoree," Hawaiian Music Museum, <http://www.hawaiianmusicmuseum.org/honorees/1995/kekeku.html> (accessed April 20, 2006).

⁵⁵ Radio Smithsonian, "Background," Guitar: Electrified, Amplified and Deified, <http://www.si.edu/sp/onair/guitar2.htm> (accessed February 20, 2006).

⁵⁶ Rickenbacker International Corporation, "The Earliest Days of the Electric Guitar."

⁵⁷ Freeth and Alexander, *The Electric Guitar*, 22.

wooden body and also featured Beauchamp's pickup design.⁵⁹ In 1932, Ro-Pat-In released an electric mandolin.⁶⁰ By 1933, the company's brochures (now featuring the name Electro String) no longer prominently displayed the Frying Pan. Although customers could still purchase the original model, the company had introduced a standard elongated body with hourglass curves to its design of Hawaiian guitars.⁶¹

More importantly, though, the company released the Bakelite Model B Spanish guitar in 1935. Because Bakelite is a heavy material, Electro String made these models smaller than the average guitar of the day.⁶² Although the body of the Bakelite Spanish model contained some hollow chambers, the instrument did not rely on these chambers for aid in sound production. The hollow chambers were practical rather than acoustic. Players already had a difficult time with the Bakelite Model B Spanish guitar due to its weight, and a solid Bakelite model would have had to rest on

⁵⁸ Rickenbacker International Corporation, "1931 Catalog," Literature Archive, http://www.rickenbacker.com/catalog_booklet.asp?pages=2&catalog=31 (accessed February 20, 2006).

⁵⁹ Freeth and Alexander, *The Electric Guitar*, 22.

⁶⁰ Rickenbacker International Corporation, "1932 Catalog," Literature Archive, http://www.rickenbacker.com/catalog_booklet.asp?pages=2&catalog=32 (accessed February 20, 2006).

⁶¹ Rickenbacker International Corporation, "1933 Catalog," Literature Archive, http://www.rickenbacker.com/catalog_booklet.asp?pages=4&catalog=33 (accessed February 20, 2006).

⁶² Rickenbacker International Corporation, "The Earliest Days of the Electric Guitar."

a stand.⁶³ Although the Bakelite Model B Spanish guitar did not sell as well as the Hawaiian model and was technically not a solid body guitar, it is an important predecessor of the solid bodies that appeared on the market less than two decades later.

Les Paul, Travis Bigsby, and Leo Fender: The Enduring Legacy of the Next Generation of Tinkerers

In the meantime, other guitar manufacturers rushed to get any electric model on the market. In 1935, eleven years after dismissing Loar's innovations, Gibson employee Walter Fuller created the key to the company's first electric guitar. He designed a pickup comprised of "two solid nickel magnets mounted on a steel bar and surrounded by a coil."⁶⁴ Later that year, Gibson released its first electric guitar, a lap steel model.⁶⁵ In 1936, the company released the ES-150, which was an electric Spanish model featuring an archtop body, two f-holes, and the same pickup as the previously released electric model.⁶⁶ Jazz guitarist Charlie Christian popularized the

⁶³ Rickenbacker International Corporation, "The Earliest Days of the Electric Guitar."

⁶⁴ Gibson Guitar Corporation, "The First Gibson Electrics," The Gibson Story, <http://www.gibson.com/AboutUs/The%20Gibson%20Story/First%20Gibson%20Electrics/> (accessed February 20, 2006).

⁶⁵ Achard, *The History and Development of the American Guitar*, 10.

⁶⁶ Gibson Guitar Corporation, "The First Gibson Electrics."

ES-150 by playing the model with Benny Goodman's band.⁶⁷ To this day, people still refer to the ES-150 as the "Charlie Christian" model.⁶⁸ One can better understand Gibson's later contributions to the manufacture of electric guitars by looking at them in relation to the contributions of Les Paul, Travis Bigsby, and Leo Fender.

Les Paul was born on June 9, 1915, in Waukesha, Wisconsin. His father, George Polsfuss, operated a car repair service from the family home. By the age of 12, Paul expressed an interest in music and electronics, and he spent much of his life conducting audio experiments. At the age of 14, Paul attempted to amplify his guitar through his father's phonograph; this entailed taping the arm of the phonograph to the top of his guitar, inserting the needle into the wood to pick up vibrations, and turning the volume as high as possible.⁶⁹ Although louder than their non-electric predecessors, turning the volume up on an early electric guitar was likely to result in distortion. As a musician, Paul sought a way to amplify a guitar so that it produced a loud tone free of any extraneous noise. Paul figured that if he could prevent the body from vibrating, he could eliminate all other sound, so he began working on a solid

⁶⁷ Jas Obrecht, "Charlie Christian: First Star of the Electric Guitar," *Guitar Player*, March 1982, 48-49.

⁶⁸ Gibson Guitar Corporation, "The First Gibson Electrics."

⁶⁹ Mary Alice Shaughnessy, *Les Paul: An American Original* (New York: William Morrow and Company, Inc., 1993), 14, 19-20, 30.

body design. In the mid-1930s, Paul asked the Larson Brothers, who were Chicago instrument makers, to make him a guitar with a half-inch thick maple top and no f-holes.⁷⁰ In the 1940s, Epi Stathopoulos, instrument maker and founder of Epiphone, allowed Paul access to the Epiphone workshop. There, Paul created a guitar nicknamed “the Log” by mounting the pickups and bridge to a solid piece of pine and attaching a manufacturer’s neck to it. To give the instrument a standard look, Paul attached “the bouts from an Epiphone hollow-body archtop” to the guitar’s sides; however, Gibson rejected the design in 1949.⁷¹

Many historians credit Les Paul as the father of the solid body guitar; however, Paul’s design was never commercially produced, and an engineer named Paul Bigsby had already produced a solid body instrument in 1947.⁷² Bigsby created the guitar at the behest of country star Merle Travis. Travis sketched the design and Bigsby built it to his specifications, which included both old and new innovations.⁷³ The body shape mimicked the single cutaway design of the Gibson L-5, while the single-sided headstock was reminiscent of Martin’s designs. The straight-through neck was an important innovation and the same design concept Paul had been working on with the Log. While Paul attached a separate neck to his instrument,

⁷⁰ Waksman, *Instruments of Desire*, 38, 43.

⁷¹ Burrows, *Guitar*, 60.

⁷² *Ibid.*, 63.

⁷³ Waksman, *Instruments of Desire*, 90-91.

Bigsby constructed the neck and the central body piece supporting the bridge and pickup from a single piece of wood. Bigsby attached the rest of the maple body to the central body portion of the guitar's neck.⁷⁴

While Bigsby produced only about a dozen of his solid body guitars, Fender was working on bringing the principles of mass production to the guitar industry.⁷⁵ Fender was neither a luthier nor a musician, and, according to former employees, he could not even tune a guitar.⁷⁶ Fender was an engineer with a background in electronics who ran a radio repair shop in Los Angeles.⁷⁷ At his shop, Fender repaired amplifiers and became interested in improving the sound of electric guitars.⁷⁸ On September 26, 1944, Fender and Clayton "Doc" Kauffman filed a patent application for a new pickup design. Whereas the older pickup designs featured a single coil that surrounded all six of the magnetic pole pieces, their design featured a single wire coil wrapped around each of the six pole pieces.⁷⁹ In 1945, Fender and

⁷⁴ Burrows, *Guitar*, 63.

⁷⁵ Ibid., 63, 66.

⁷⁶ André Millard, "Inventing the Electric Guitar," in Millard, 61.

⁷⁷ Freeth and Alexander, *The Electric Guitar*, 25-26.

⁷⁸ Ibid.; Rickenbacker International Corporation, "The Earliest Days of the Electric Guitar."

Kauffman founded Fender and Kauffman Manufacturing in Fullerton, California, and began custom building electric steel guitars and amplifiers.⁸⁰ Unlike Fender, Kauffman was not new to the field of instrument design. He had devised a vibrato tailpiece unit to change the pitch of the guitar, and Electro String had purchased the rights to manufacture his design.⁸¹ In 1946, however, Kauffman sold his share in the company to Fender, who changed the company name to Fender Manufacturing Company, moved the production site, and hired more employees.⁸² The business prospered and Fender made a marketing deal with the Radio-Tel Company, which was owned by F.C. Hall, who also purchased Electro String in 1953.⁸³ Upon the advice of one of his salesmen, Fender soon turned his attention to manufacturing an inexpensive, electric Spanish model guitar.⁸⁴

⁷⁹ *Pickup Unit for Instruments*, by Clayton Orr Kauffman and Clarence Leo Fender. (1948, December 7). Patent No. 2,455,575; available from <<http://www.pat2pdf.org>>; Internet.

⁸⁰ Millard, "Inventing the Electric Guitar," 51-53; Kraft, 73.

⁸¹ Millard, "Inventing the Electric Guitar," 51.

⁸² Kraft, 73.

⁸³ Millard, "Inventing the Electric Guitar," 53; Rickenbacker International Corporation, "The Earliest Days of the Electric Guitar."

⁸⁴ Millard, "Inventing the Electric Guitar," 53.

In 1951, Fender released a model called the Broadcaster, which was the first solid body electric Spanish guitar to enter mass production.⁸⁵ Due to a dispute with Gretsch, another instrument manufacturer, over the name, Fender Manufacturing changed the model name to Telecaster.⁸⁶ Fender Manufacturing used heavy punch presses to stamp out the guitar bodies, which required little additional shaping or sanding. Semi-skilled workers bolted the necks onto the bodies, covered the screws with a chrome jack plate, and added the electronic components.⁸⁷ The Telecaster featured two pickups, which became standard design for electric guitars by 1954.⁸⁸ Fender's instruments also had slim necks, stayed in tune well, and did not produce feedback at high volume. These features quickly made Fender guitars popular among many musicians. Most musicians played Fender instruments because they chose to, but Fender Manufacturing also promoted their instruments by paying a few stars to play Fender models.⁸⁹

⁸⁵ Fender Musical Instruments Corporation, "History of Fender Musical Instruments Corporation," Fender History, <http://www.fender.com/resources/companyinfo/history.php> (accessed February 20, 2006).

⁸⁶ Burrows, *Guitar*, 68.

⁸⁷ Kraft, 74.

⁸⁸ André Millard, "Solidbody Electric Guitars," in Millard, 94-95.

⁸⁹ Kraft, 74.

The 1950s marked a period of heavy production and rapid design innovation in the guitar industry as other manufacturers released their own solid body electric guitars. Gibson had begun work on its own solid body electric in 1950 under the direction of Ted McCarty, who was the company's president and general manager, and in 1951, the company called on Les Paul for design advice.⁹⁰ Paul had recently designed a tailpiece with a cylindrical bar, and the incorporation of this tailpiece was the only of Paul's suggestions that Gibson utilized. Although the resulting instrument bore Paul's name, Gibson's employees did the bulk of the design work.⁹¹ Gibson released the Les Paul in 1952.⁹² Gibson's first solid body electric upheld the company's standards of fine craftsmanship with its carved and contoured top; use of mahogany, maple, and rosewood; and bright, golden finish.⁹³ As a luxury instrument, the Les Paul could not compete with the affordability of Fender guitars.⁹⁴

⁹⁰ Ibid.; Burrows, *Guitar*, 83.

⁹¹ Shaughnessy, *Les Paul*, 202.

⁹² Gibson Guitar Corporation, "The Golden Age of Innovation," The Gibson Story, <http://www.gibson.com/AboutUs/The%20Gibson%20Story/Golden%20Age%20of%20Innovation/> (accessed February 20, 2006).

⁹³ Gibson Guitar Corporation, "The Golden Age of Innovation"; Burrows, *Guitar*, 83.

⁹⁴ Burrows, *Guitar*, 83.

Fender increased the competition between the two companies with the release of the Stratocaster in 1954.⁹⁵ The Stratocaster incorporated the suggestions of musicians, some of whom Fender Manufacturing employed as design consultants, with the innovations of Leo Fender and other company employees.⁹⁶ The Telecaster design had avoided the contours of traditional archtops, which made the instrument difficult to play for long periods.⁹⁷ Consequently, the designers of the Stratocaster focused their efforts on creating a guitar that was comfortable to play. This meant designing a thinner, harder body for the guitar with contours that made the instrument fit snugly against the player's body. The Stratocaster featured twin cutaways to the upper bout, which made the instrument's "horns" stand out amid the more standard single cutaway design of many electric guitars. Although the shape was unusual at the time, the Stratocaster set the standard for the body shape of electric guitars. The instrument also featured the addition of a third pickup.⁹⁸ While Gibson had released a guitar with three pickups in 1949, the Stratocaster increased the tonal possibilities of the guitar because players were able to lodge the switch that controlled the pickups

⁹⁵ Fender Musical Instruments Corporation, "History of Fender Musical Instruments Corporation."

⁹⁶ Millard, "Solidbody Electric Guitars," 94.

⁹⁷ Ibid., 93-94; Burrows, *Guitar*, 66.

⁹⁸ Millard, "Solid Body Electric Guitars," 93-95.

between positions.⁹⁹ Although the Stratocaster is now an icon of electric guitars, it was not an immediate success.¹⁰⁰

The last design innovation this paper will examine is the advent of the humbucker pickup. Invented by Seth Lover in 1955, the humbucker pickup utilized two coils wired out of phase with one another. This ensured that one pickup canceled out any hum that the other pickup generated. Guitars with humbucker pickups produced a sound with less treble than guitars fitted with single-coil pickups. Starting in the mid-1950s, Gibson installed humbucker pickups on all its guitar models.¹⁰¹ The Les Paul Standard, released in 1958 and pulled from the market about two years later, featured humbucker pickups. Ahead of its time, musicians did not appreciate the sound of the Standard until the mid-1960s, which helped create a market for secondhand instruments and led to Gibson's re-release of the Standard in 1968.¹⁰²

⁹⁹ Ibid., 95; Gibson Guitar Corporation, "The Golden Age of Innovation."

¹⁰⁰ Millard, "Solidbody Electric Guitars," 98.

¹⁰¹ André Millard, "Playing with Power: Technology, Modernity, and the Electric Guitar," in Millard, 124.

¹⁰² Burrows, *Guitar*, 84.

CHAPTER 3

MASCULINIZING TECHNOLOGIES

As the history of its technological innovation illustrates, the electric guitar grew out of an industry steeped in tradition. Many of the key players in the early drive to electrify the guitar had apprenticed under luthiers or were the sons of instrument makers. All of the innovators and company executives were men. New companies, such as Ro-Pat-In and Fender, led the market in electric guitar innovations and helped mark the transition of power in the industry from traditional instrument makers to tinkerers. This chapter will examine the reasons behind this transition and how it encouraged the continuation of male dominance in designing, manufacturing, and playing the electric guitar.

Established instrument manufacturers were hesitant to enter the electric guitar market for reasons based in tradition and practicality. First of all, established companies cannot be faulted for failing to see the potential of electrified instruments at a time when many Americans did not have electricity in their homes. Secondly, the old technologies used to produce acoustic instruments had brought success to established companies for over a hundred years in some cases. These companies were not willing to abandon proven technologies to take a chance on a technology

still in its experimental stages.¹ Instrument makers willing to experiment, such as the Dopyera brothers, and tinkerers, such as George Beauchamp, were free to enter the market with relatively little competition. This, in turn, paved the way for tinkerers like Les Paul and Leo Fender to make names for themselves through their involvement in the production of solid body electric guitars.

Sound Experiments: Radio and Phonograph Tinkering and the Development of the Electric Guitar

The evolution of the electric guitar is closely related to the evolution of the radio and phonograph. Both radio and electric guitars exist in their current forms due in large part to the innovations of tinkerers during the early stages of the technologies' development. The culture of tinkering associated with the widespread construction of radios and the electrification of the guitar contributed to making music a masculine pastime in the twentieth century. During the nineteenth and early twentieth centuries, cultural values held that music appreciation was a pastime relegated to women. In 1922, women still comprised the vast majority of music students and concert audiences. Likewise, guitar playing was a common hobby among women prior to the instrument's electrification.² The masculinization of home

¹ Kraft, 69-70.

² John Strohm, "Women Guitarists: Gender Issues in Alternative Rock," in Millard, 184.

audio technologies is a phenomenon of and reaction to post-World War II American society. Men returned from military service and used do-it-yourself (DIY) hobbyism as an outlet for the electronics skills they had gained in the armed forces. With suburban homes emphasizing togetherness, men also turned to audio hobbies as a means to reclaim specifically masculine domestic space.³ Radio, with its need to be constructed and tinkered with, legitimized music appreciation for men.⁴

While radios had often been relegated to attics or garages as unsightly experiments in electronics, the commercialization of radio brought a new design and marketing strategy to the industry. In order to market manufactured receivers rather than components or kits, manufacturers, working under the assumption that consumers are female while producers (or, in this case, tinkerers) are male, appealed to the female consumer by designing radios to look like furniture and using advertising to play up the idea that the device was a guest in the home.⁵ As would be later seen with the electric guitar, manufacturers worked from the stereotype that men are more technologically capable than women and assumed that the inaccessibility of

³ Keir Keightley, "'Turn It Down!' She Shrieked: Gender, Domestic Space, and High Fidelity, 1948-59," *Popular Music* 15, no. 2 (1996): 150-151, 153.

⁴ Susan J. Douglas, *Listening In: Radio and the American Imagination...from Amos 'n' Andy and Edward R. Murrow to Wolfman Jack and Howard Stern* (New York: Times Books, 1999), 88-89.

⁵ Steven Lubar, "Men/Women/Production/Consumption," in *His and Hers: Gender, Consumption, and Technology*, ed. Roger Horowitz and Arwen Mohun, (Charlottesville: University Press of Virginia, 1998), 28.

the technologies to women was a product of design rather than a product of the culture and its traditional gender roles. Tuning in distant cities was a sign of technological prowess and advertisers associated this activity with men.⁶ Advertisers characterized women as passive users who were interested in radios as a source of entertainment and educational opportunities for their families. In order to convince men that purchasing an expensive manufactured set was better than building one's own, advertisers turned to convincing women that a manufactured set would prevent her from becoming a radio widow and bring her family closer together. Such marketing was aimed at persuading women to encourage their husbands to purchase manufactured sets. In order to appeal to a new and broader market, manufacturers disassociated their products from tinkering. They manufactured receivers that required less technical skill to use and often required that users have their receivers repaired by professional technicians. Advertisers also shifted their marketing to men from a purely technological basis to one that also encompassed cultural concerns.⁷ Radio technologies came to prominence during the 1920s, a time when women were gaining more freedoms such as the right to vote and, as a result, advertisers began to promote their products to men based on the devices' "alleged ability to sustain the

⁶ Ibid.; Louis Carlat, "'A Cleanser for the Mind:' Marketing Radio Receivers for the American Home, 1922-1932," in Horowitz and Mohun, 116.

⁷ Carlat, 122, 125, 128, 130.

past by persuading women to remain at home.”⁸ This shift towards marketing to cultural desires rather than technological ones was illustrated through a change in the placement of advertisements for radios from the automobile and airplane sections to the cultural section of the Sunday *New York Times*. Although manufacturers dissuaded consumers from tinkering with radio receivers, their marketing served to reinforce traditional gender roles, such as the alignment of masculinity with tinkering and femininity with passive consumption, by designing technologies that were so simple to operate “even women could manage it.”⁹

Nevertheless, many boys and men gained knowledge about electronics through radio construction and tinkering, and this knowledge aided in the development of many other technologies including television, automobiles, and the electric guitar.¹⁰ Furthermore, the United States was not alone in its experience of a postwar boom in DIY hobbyism. For example, many war-related factors resulted in the culture of tinkering that ultimately led to the success of Japan’s electronics industry. These factors included a lifting of the ban on the reception of foreign broadcasting, a surplus of inexpensive electronics components after the dismantling

⁸ Ibid., 130.

⁹ Ibid., 124, 126.

¹⁰ Douglas, *Listening In*, 52; Robert C. Post, *High Performance: The Culture and Technology of Drag Racing, 1950-1990* (Baltimore: The Johns Hopkins University Press, 1994); Yuzo Takahashi, “A Network of Tinkerers: The Advent of the Radio and Television Receiver Industry in Japan,” *Technology and Culture* 41.3 (2000).

of the Japanese military, and the postwar poverty of the Japanese people. While many in the United States experienced a postwar affluence that allowed them to purchase manufactured radio sets, Japanese consumers, faced with an economic depression, had the incentive of not paying tax on radio kits or on the purchase of radios built in the unofficial sector of tinkerers and small entrepreneurs. Additionally, the Japanese government during the war and the occupation government after the war encouraged the culture of radio tinkering due to radio's effectiveness at spreading propaganda. Engineering organizations, government-sponsored training courses in radio construction and repair, magazines that encouraged boys to experiment with radios, and prize contests for handmade sets also promoted this culture of tinkering. Although, in an article on this network of tinkerers, professor of electrical engineering Yuzo Takahashi mentions that some women did complete electronics training courses, the fact that the network's membership was predominantly male is betrayed elsewhere in the article by references to magazines aimed at boys and a statement asserting that thousands of men may never have pursued careers in electronics had it not been for their start as amateur tinkerers.¹¹

Like the tinkerers who later became successful engineers in Japan's official electronics sector, many of the fathers of the electric guitar began with experiments relating to radios and phonographs. The Dopyera brothers utilized a Victrola horn in their first attempt to amplify a guitar for George Beauchamp. During his own

¹¹ Takahashi, "A Network of Tinkerers," 461, 464, 466, 468, 470, 472, 483-484.

experiments, Beauchamp modified a phonograph pickup and attached it and a single string to a wood block.¹² Les Paul conducted audio experiments throughout his life and, at the age of 12, built a crystal set without using a kit. From then on, he sought to learn as much as he could about electronics by reading books and hanging around radio stations and radio supply shops.¹³ His first attempt at amplifying his guitar involved using his father's phonograph. Fender began his career as a radio enthusiast. Prior to establishing his radio repair shop, Fender made a business of building and renting out amplifiers and public address systems. At the radio repair shop he opened in 1938, Fender also repaired phonographs and amplifiers and sold records.¹⁴ Additionally, Van Nest, who ran a radio shop in Los Angeles, designed and built the first amplifier model produced by Electro String.¹⁵

Many other amateur tinkerers conducted similar experiments in order to amplify their guitars. Even after electric guitars became commercially available, musicians chose to modify their own instruments. First of all, the electric instruments were not widely available, especially in rural areas.¹⁶ Secondly, the electric guitar

¹² Millard, "Inventing the Electric Guitar," 47.

¹³ Shaughnessy, *Les Paul*, 30, 33.

¹⁴ Millard, "Inventing the Electric Guitar," 51.

¹⁵ Rickenbacker International Corporation, "The Earliest Days of the Electric Guitar."

¹⁶ Waksman, *Instruments of Desire*, 123.

emerged during the Great Depression, a time when most musicians could not afford to spend \$150 on a new instrument. Third, some of these tinkerers may have simply been technological enthusiasts who were thrilled to test the limits of new technologies with little concern for any financial or other gain that may result from such experimentation.¹⁷ Many musicians recognized that they already possessed the components necessary for amplification through other electronic household devices. For example, radios contained loudspeakers and amplifiers; phonographs contained pickups and loudspeakers; and telephones and microphones utilized transducers. Some musicians fashioned their own pickups out of the coils and magnets contained in telephone receivers.¹⁸ A 1936 article that provided instructions for building a pickup stated that most radio receivers could be sufficiently used as amplifiers.¹⁹ Even famous musicians like Eddie Durham, the legendary jazz guitarist who influenced Charlie Christian, experimented with ways of amplifying their guitars. Durham carved out the top of his acoustic guitar and inserted a tin pie plate. When he played, the pie tin resonated with sound. To further increase his instrument's volume, Durham played through a megaphone. Soon he purchased a National resonator guitar and replaced its bridge with one from a standard acoustic guitar. This enabled him to

¹⁷ Post, *High Performance*, xvii, 285.

¹⁸ Millard, "Inventing the Electric Guitar," 47.

¹⁹ Felix Glavnig, "How to Amplify String Instruments," *Popular Mechanics*, July 1936, 101+.

play the instrument without the steel bar, and when he placed a microphone near the resonator, his instrument could be heard as well as the rest of the band.²⁰

The Race to Innovate in the Space Age

The electric guitar owed its design innovations to more technologies than the radio and phonograph. During the 1950s and 1960s, electric guitar manufacturers connected their instruments to the nation's burgeoning car culture and obsession with the space race. The name of the Fender Telecaster made reference to television, while the model name Stratocaster linked the instrument to space travel.²¹ The reference to technologies of flight is hardly surprising given Fender Manufacturing's management at the time. In 1954, Fender hired Forrest White, who had been an engineer at Goodyear Aircraft.²² The advent of the solid body enabled manufacturers to significantly alter the body shape of guitars, and many guitar shapes of the period, with their cutaways and horns, echoed the fins popular on automobiles.²³ In addition to the shapes, electric guitar manufacturers also appropriated automobiles' paint jobs by choosing metallic finishes in an attempt to differentiate their instruments from

²⁰ Siegel and Obrecht, "Eddie Durham."

²¹ Burrows, *Guitar*, 71.

²² Kraft, 76.

²³ Burrows, *Guitar*, 87.

those of other manufacturers.²⁴ Gibson made the connection between electric guitars and automobiles explicit when it hired Ray Dietrich, an automobile designer, to collaborate on a new model. The company released the resulting model in 1963 under the name Firebird.²⁵ Both large and small guitar manufacturers released models with names either borrowed from or more suited to the automobile and aircraft industries. These included the Guild Thunderbird; Fender Jaguar; and Gretsch Duo Jet, Jet Firebird, and Corvette.²⁶ These model names also capitalized on the popularity of hot rods, muscle cars, and sports cars among teenagers who were attempting to distance themselves from their parents' values and build their own identities. At a time when teenage boys regularly made extensive alterations to the bodies and power of standard automobiles, guitar manufacturers responded by modernizing the bodies of their products.²⁷

The Masculinization of Technology

Another barrier to women even picking up an electric guitar is the masculinization of powerful and prestigious technologies. Ruth Oldenziel argued that

²⁴ André Millard, "Playing with Power," 127.

²⁵ Burrows, *Guitar*, 92.

²⁶ Achard, *The History and Development of the American Guitar*, 75, 82.

²⁷ Andrew Hurley, *Diners, Bowling Alleys, and Trailer Parks: Chasing the American Dream in Postwar Consumer Culture* (New York: Basic Books, 2001), 297-298.

the masculinization of technology is largely a product reflective of racial, gender, and international relations in the twentieth century. Beginning in the 1890s, society increasingly looked to machines as the most important inventions. The steel and other machine-related industries employed few women, which distanced women from important technologies. Most patent owners were white males, and many Americans at the time accepted that women and other races naturally lacked inventive genius, which helped place technology in direct relation to white, middle class notions of manliness. These notions of manliness upheld athletes and working class men as standards and devalued women and non-white males. By the end of the 1930s, the public had inextricably linked prestigious technology and engineering, an occupation dominated by white, middle class males. The idea of powerful or prestigious technology as a male preserve firmly took hold in the public mind at a time when women entered the workforce in larger numbers than they previously had. The increase in women's mastering of machines in jobs as secretaries, factory workers, and switchboard operators, threatened male power. The acceptable feminine pursuit of technology involved the devalued technologies associated with homemaking and pink collar assembly line work. Despite evidence to the contrary, men's best defense involved attempting to erase women from the history of technology by emphasizing man's "natural" aptitude for all things technological. This attitude has succeeded in devaluing women's contributions to technological fields; enabled men to look upon

any woman entering a technological field, regardless of her training and ability, as an amateur; and barred many women from access to technological pursuits.²⁸

Consuming Dichotomies

Such masculinization of technology is also related to the dichotomy of the male producer and female consumer. Thorstein B. Veblen, an institutional economist of the late nineteenth and early twentieth centuries, wrote that women of the leisure class played a primarily decorative role. Female idleness enhanced their male partner's status by conspicuously demonstrating that these middle class men provided so well that their wives did not have to contribute financially to the relationship. Such statements reinforce the idea that economic contributions, measured through one's production of goods, are the only important household contributions. Traditionally female activities, such as childrearing and homemaking, are, by this definition, duties rather than contributions to the family. In other words, men are superior because they produce so that women may consume.²⁹

The male producer/female consumer dichotomy, although used in advertising since at least the mid-nineteenth century, became explicit in American culture during

²⁸ Ruth Oldenziel, *Making Technology Masculine: Men, Women and Modern Machines in America, 1870-1945* (Amsterdam: Amsterdam University Press, 1999), 10-12, 27, 31, 182.

²⁹ *Ibid.*, 44, 49-50.

the prosperous years after World War II. Manufacturers exploited familial responsibilities in their advertisements, and, in the process, reinforced the roles of producer and consumer as gender specific. Around 1945, advertisers began promoting the image of the balanced homemaker as a wife and mother able to care for her family without sacrificing her personal interests.³⁰ Advertisers helped establish the male identity as producer in the postwar consumer culture by appealing separately to men's and women's familial responsibilities.³¹ The images of husbands and fathers reflected back to society through advertising depicted the male role as that of the producer who generously allowed his wife to partake in consumer culture for the benefit of the entire family.³²

This male producer/female consumer dichotomy continues to exist in much of American culture including rock 'n' roll, a genre steeped in the sound of the electric guitar. An important step in masculinizing the electric guitar came with the instrument's electrification. Many Americans valued electrification as a symbol of modernity. With electricity in male hands and the increased linking of other

³⁰ Hurley, *Diners, Bowling Alleys, and Trailer Parks*, 291-293.

³¹ Ibid., 295; Ruth Oldenziel, "Boys and Their Toys: The Fisher Body Craftsman's Guild, 1930-1968," in *Major Problems in the History of American Technology*, ed. Merritt Roe Smith and Gregory Clancey (Boston: Houghton Mifflin, 1998), 372-373.

³² Hurley, *Diners, Bowling Alleys, and Trailer Parks*, 293.

technologies to masculinity, the electric guitar also became a male preserve.³³ Additionally, audiences favored big band swing in the 1930s and 1940s, and the musicians in these bands were overwhelmingly male. Mainstream audiences considered female guitarists to be novelty acts.³⁴ Furthermore, early consumers ascribed sexual meaning to electricity when they referred to flirting as “sparking.”³⁵

The advent of rock ‘n’ roll reinforced the technological gender gap and expanded the sexual meaning associated with the harnessing of electricity. In the 1950s, manufacturers targeted teenagers as a distinct marketing demographic and drew on many of the same principles to appeal to girls and boys as they used to appeal to these teenagers’ mothers and fathers. Although as audience members, boys and girls alike fill the role of consumer, cultural values and marketing ensure that, in general, the genders consume in different ways. While boys identify with rock musicians in sexual terms, they also attempt to align themselves with performers through record collecting, learning to play an instrument, or aspirations to work in the music industry.³⁶ Although Gibson and Electro String recognized early on the

³³ André Millard, after the collaborative paper with Rebecca McSwain, “The Guitar Hero,” in Millard, 157.

³⁴ Strohm, 184-185.

³⁵ Millard, after the collaborative paper with Rebecca McSwain, “The Guitar Hero,” 157.

potential of celebrity endorsement, manufacturers did not fully realize the extent to which consumer identification with a star of the electric guitar could boost instrument sales.³⁷ Dean Zelinsky, founder of Dean Guitars, however, summed up male fans' sexual identification with rock stars when he claimed, "'You played the guitar so you could get laid. We found out that a hot chick sold more guitars than a hot rock star.'"³⁸

On the other hand, in order to capitalize on the popularity of Elvis, manufacturers printed his image on products ranging from pillows to socks and released lipstick in shades like Heartbreak Hotel Pink.³⁹ The Elvis example demonstrates the difference between the way the music industry markets to boys and girls. In such ways, girls learn to identify with rock performers in ways opposite of boys. Through lyrics and merchandising, girls learn to fantasize about becoming the rock star's object of affection rather than his equal. Males consume actively by attempting to become the rock star, and females consume passively by dreaming

³⁶ Simon Frith and Angela McRobbie, "On the Expression of Sexuality," in *Music, Culture, and Society: A Reader*, ed. Derek B. Scott (New York: Oxford University Press, 2000), 65-70.

³⁷ Millard, "Playing with Power," 128; Gibson Guitar Corporation, "The First Gibson Electrics,"; Gibson Guitar Corporation, "The Golden Age of Innovation"; Rickenbacker International Corporation, "The Earliest Days of the Electric Guitar."

³⁸ Quoted in David Konow, *Bang Your Head: The Rise and Fall of Heavy Metal* (New York: Three Rivers Press, 2002), 199.

³⁹ Hurley, *Diners, Bowling Alleys, and Trailer Parks*, 295-296.

about providing companionship to the rock star.⁴⁰ Some historians and critics have argued that rock 'n' roll allows teenagers to rebel against values such as domesticity and monogamy, which tend to be culturally viewed as feminine values.⁴¹ Upon closer inspection, however, mainstream rock songs, especially those targeting female fans, often reinforce traditional notions of romantic relationships and gender roles.⁴²

Although females also actively consume music through record collecting, men predominate the pastime.⁴³ The same notions of gender that ensure that women remain on the periphery of musical performance also ensure that they remain on the periphery of musical consumption, which, in turn, has led to women listening mainly to the record collections of their husbands or boyfriends. Both Sheila Whiteley, a professor of popular music, and journalist Lucy O'Brien have argued that women's experience of music through the collections of men rather than through their own

⁴⁰ Frith and McRobbie, "On the Expression of Sexuality."

⁴¹ Strohm, 183-184.

⁴² Hurley, *Diners, Bowling Alleys, and Trailer Parks*, 298.

⁴³ Will Straw, "Sizing Up Record Collections: Gender and Connoisseurship in Rock Music Culture," in *Sexing the Groove: Popular Music and Gender*, ed. Sheila Whiteley (New York: Routledge, 1997), 4.

collections has resulted in low ratings for women artists in music press polls and has also had a significant affect on the critical evaluation of popular musicians.⁴⁴

Techno-Phallus: Sex, Power, and Rock 'n' Roll

In addition, some bluesmen and early guitar gods like Jimi Hendrix imbued the electric guitar with connotations of hypersexuality. Many bluesmen referred to their electric guitars as “easy riders.” This term referred to the fact that the instrument could be easily carried on the musician’s back, but it also referred to a female sexual partner.⁴⁵ The electric guitar in rock ‘n’ roll initially derived its sexual connotations from African American electric blues guitarists as a result of long- and widely held racist beliefs that African Americans, being allegedly more primitive, were also inherently more sexual than white people. Although the overtly sexual theatrics of early guitar gods signified white, male rebellion against traditional norms of decorum, they also reinforced racism and sexism by defining the electric guitar as a predominantly white, male instrument.⁴⁶

⁴⁴ Lucy O’Brien, *She Bop II: The Definitive History of Women in Rock, Pop and Soul* (New York: Continuum, 2002), 457; Sheila Whiteley, *Women and Popular Music: Sexuality, Identity, and Subjectivity* (New York: Routledge, 2000), 5.

⁴⁵ Millard, “The Guitar Hero,” 145.

⁴⁶ Waksman, *Instruments of Desire*, 4, 13.

The linking of sexual prowess to electric guitar virtuosity involves syntonicity, i.e., the identification of a technology as part of one's body.⁴⁷ In terms of rock 'n' roll performance, the electric guitar takes on the role of technophallus. Through body positioning and flamboyant physical displays, players like Hendrix fortified male dominance over the electric guitar with a large dose of phallic symbolism.⁴⁸ Male electric guitarists often handle their instruments in ways that recall sexual acts or emphasize the phallic symbolism of their guitars. Photographs of Jimi Hendrix playing on his knees with his head thrown back and guitar held in front of his outthrust pelvis have captured (and perhaps perpetuated) this phenomenon.

Ergonomically speaking, the guitar is most easily and comfortably played when held somewhere between the player's chest and waist. Despite this fact, many rock guitarists play low-slung guitars held below the waist. Such positioning of the guitar makes it a much more obvious phallic symbol. Through the influence of the sexually charged performances of guitar gods, many fans and players have come to regard low-slung guitars as the only positioning that looks right. Therefore, even on women, the instrument appears as an extension of the male body type, reinforcing the idea that the electric guitar should be left to male hands. Critics have even utilized

⁴⁷ Sherry Turkle, "The Second Self," in Smith and Clancey, 494.

⁴⁸ Waksman, *Instruments of Desire*, 188-190, 244.

the term “cock rock” to describe loud, sexually aggressive performance styles.⁴⁹ The stars of cock rock cultivated sexually virile personae through onstage performance and offstage reputations for conquering groupies. Although women could enjoy the music and appreciate its power, its misogynistic overtones and the lack of onstage female role models reinforced the idea that cock rock was an exclusively male domain.⁵⁰

Other phallocentric terms, such as “wanking” and its variants, exist to describe electric guitar performance. The term wanking is derived from British slang for masturbation, and fans and critics use it to describe a guitar technique that emphasizes speed and technical ability through playing many notes up and down the neck. While wanking denotes technical skill, most audiences find such displays tedious as these performances chiefly benefit the guitarist by allowing him to demonstrate his prowess. Prince stretched the metaphor of guitar as phallus to its limit when he had two identical guitars custom built for the *Purple Rain* film and tour. The film’s closing shot captured the image of Prince playing the custom guitar until it ejaculated liquid soap.⁵¹

⁴⁹ Frith and McRobbie, “On the Expression of Sexuality.”

⁵⁰ Maria Raha, *Cinderella’s Big Score: Women of the Punk and Indie Underground* (Emeryville, CA: Seal Press, 2005), 7.

⁵¹ “Luxe Luthier: Roger Sadowsky, Guitar Maker,” *New York*, February 3, 1997; *Purple Rain*, DVD, directed by Albert Magnoli (Warner Home Video, 1997).

In addition to the phallic symbolism of the electric guitar, the instrument also connotes qualities such as speed, violence, power, and volume through model names and styles and terminology that describes the instrument and techniques of playing it. Fans often use words like “shred,” “slay,” “rip,” “burn,” and “wail” to describe technical prowess on the electric guitar, especially in reference to guitar solos. Some people also use the term “axe” in place of guitar. By 1969, manufacturers had released electric guitar models with names like Spitfire and Marauder.⁵² With the rise in popularity of heavy metal in the 1970s and 1980s, many guitarists returned to angular body shapes that originated in the 1950s. While Gibson released the Flying V, Moderne, and Explorer models as symbols of space-age modernity in the late 1950s, heavy metal guitarists had a tendency to wield them more like weapons. The SG, a Gibson model originally released in 1961, also enjoyed a resurgence in popularity among heavy metal guitarists. The model’s twin cutaways and short, pointed horns gave players unhindered access to the frets nearest the guitar’s body.⁵³ In a genre that emphasized speed and precision in fretting, players found such access advantageous.⁵⁴ Soon other guitar manufacturers entered the market with updated

⁵² Grunfeld, *The Art and Times of the Guitar*, 274.

⁵³ Burrows, *Guitar*, 86-90.

⁵⁴ André Millard, after the collaborative paper with Rebecca McSwain, “Heavy Metal: From Guitar Heroes to Guitar Gods,” in Millard, 170.

finishes on sharp-angled guitars in order to capitalize on the new popularity of older Gibson models. Models available now include the ESP Viper, which looks like an updated version of the Gibson SG, and several models featuring deep curves or angles cut from the end of the body and upper and lower bouts ending in sharp points. Those of the latter type carry names such as the ESP Ax; B.C. Rich Bronze Warlock, Platinum Pro Zombie, and Bich (pronounced so it rhymes with “Rich”) Archtop; and the Jackson Warrior.⁵⁵ Although plenty of electric guitarists continue to play instruments with more traditional body shapes, the guitars mentioned above illustrate how some model names and body shapes have been used to appeal to men and teenage boys. As Strohm argued, women who strap on electric guitars offend traditional notions of femininity due to the alignment of the electric guitar with notions and symbols of masculinity.⁵⁶

⁵⁵ *Musician's Friend*, Holiday Gift Catalog, 2005.

⁵⁶ Strohm, 184.

CHAPTER 4

I WANNA BE YOUR “GOD”: DIVINITY, ELECTRICITY, AND GENDER

While amateur tinkerers and other technologies aided in the propagation among consumers of the idea that electric guitars belong in the masculine realm, decades earlier consumers had already ascribed values to electricity that reinforced the masculinization of the instrument. Before people understood how electricity and electric devices operated, consumers and even some scientists had a tendency to ascribe supernatural or divine origins to the functioning of electric devices. Although consumers no longer identify electrification as a miracle, these early ideas continue to pervade discussion of the electric guitar and its players. The idea of the divine origin of electrification is demonstrated through early advertisements for guitars and the metaphorical identification of exceptional players as guitar gods. Because the vast majority of Americans worship a male deity, a tendency exists to equate the divine with the masculine. When success as a guitarist emphasizes the attainment of god-like status, critics and fans alike erect another barrier to women’s entrance into (not to mention equality within) the realm of the electric guitar.

Biblical Barriers

Although the women’s movement (otherwise known as second wave feminism) began shortly after the guitar god emerged as a figure in popular culture,

few female electric guitarists have achieved as much fame as their male counterparts, and the image of the guitar goddess still seems strange to the majority of audiences and critics. Another reason for the lack of the goddess figure in rock 'n' roll lies in the predominance of male-centered religion in the United States, which serves to reinforce the binary system of gender. In *When God Was a Woman*, art historian Merlin Stone argued that the story of Genesis and the fall of Eve are largely responsible for perpetuating the idea that women are not equal to men. Parents and churches teach young children that the Creator is male and He created man in His own image. The creation of woman came as an afterthought and for the purpose of providing companionship to man. After Eve sinned by eating the apple and God expelled Adam and Eve from the Garden of Eden, God granted Adam dominance over Eve and effectively granted all men dominance over women.¹

Rosemary Radford Ruether, a feminist theologian, argued that it was Greek and Hellenistic Jewish patriarchal cultures that gave God and Christ an androcentric bias. Christian doctrine has never indicated that God was a literal male, but it has assigned the qualities of rationality and sovereignty to God. Because early Christian cultures presumed these qualities to be inherently masculine traits, references to God as He or the Father resulted. Since women did not possess these qualities, Church Fathers concluded that images of God were normatively male, and as God's earthly

¹ Merlin Stone, *When God Was a Woman* (Orlando: Harcourt, Inc., 1976), xi-xv.

reflection, Jesus was also constructed as normatively male. The ongoing conflation of Jesus' gender "with the essence of Christ as God's word incarnate" reinforces the androcentric assumption that maleness can represent universal generic humanity while femaleness cannot.²

Ruether posited that the use of the term "man" in Genesis is open to a generic interpretation, which would allow both sexes to share in the sovereignty of "man" over the earth. By the end of the first century, an alternative Christianity that rejected marriage and encouraged women to participate in public teaching was challenging the dominant, patriarchal Christian culture. To combat this challenge, the story of Genesis was used "to declare that women's place is both second in nature and under punishment due to sin."³ Despite the fact "that the emphasis on Jesus' maleness as essential to his ongoing representation not only is not compatible but is contradictory to the essence of his message as good news to the marginalized *qua* women," in many ways, Judeo-Christian cultures still hold onto the idea that man is a doer and woman is his helper.⁴

² Rosemary Radford Ruether, "The Liberation of Christology from Patriarchy," in *Feminist Theology: A Reader*, ed. Ann Loades (Louisville, KY: Westminster/John Knox Press, 1990), 138-140, 147.

³ Ibid., 139, 143.

⁴ Ibid., 147.

Sacred Steel

Some musicians in the 1930s made a literal connection between the electric guitar and the divine, which resulted in a musical genre known as sacred steel. In the late 1930s, brothers Willie and Troman Eason introduced the electric steel guitar to services at the House of God, Keith Dominion church of which they were members. The House of God is an African American, Pentecostal church in the services of which music has historically played an integral part. Members of the House of God church believe scripture that references praising God with dance and stringed instruments calls for their style of worship. Troman had taken steel guitar lessons from a Hawaiian in Philadelphia and played the instrument in the traditional Hawaiian style. Willie Eason, on the other hand, created his own playing style, which emphasized playing a single string and echoed the singing of the congregation.

The sacred steel tradition of the church grew out of Willie Eason's style of playing, and, to this day, the steel guitarist remains almost as important to the worship service as the minister.⁵ Due to the sacred nature of the music, the sacred steel tradition prospered within the church for decades with little public knowledge of its existence. In the 1990s, however, Keith Dominion musicians recognized that their music could be used as a powerful evangelical tool and began playing to the public. The House of God church actively encourages boys from the congregation to learn to

⁵ Robert L. Stone, "A Brief History of the House of God Steel Guitar Tradition."

play the electric steel guitar.⁶ As noted by ethnomusicologist Jeffrey Callen, African American churches have played an important role in ensuring that nontraditional gender roles remain outside of acceptable standards of morality.⁷ In this case, the church's targeting of boys to carry on the electric steel tradition mirrors secular America's tendency to identify playing the electric guitar as a masculine pastime.

The Divine Miracle of Electricity

The linking of electricity and the divine was not limited to the electric guitar or Pentecostal churches; earlier consumers and advertisers also tended to relate electrification to divine origins. In 1745, Pieter van Musschenbroek created the Leyden jar, which allowed for the accumulation of electricity in a jar and enabled the mysterious substance to be studied in a controlled environment. By 1844, when Samuel B. Morse successfully demonstrated the use of his electromagnetic telegraph, electricity was still closely connected to the life force in the minds of many scientists and the public. By the end of the 1840s, Modern Spiritualism had taken shape as a religious and political movement based on the idea that it was possible to create a

⁶ *Sacred Steel: The Steel Guitar Tradition of the House of God Churches*, DVD, directed by Robert L. Stone (Arhoolie Foundation, 2003).

⁷ Jeffrey Callen, "Gender Crossings: A Neglected History in African American Music," in *Queering the Popular Pitch*, ed. Sheila Whiteley and Jennifer Rycenga (New York: Routledge, 2006), 195.

telegraph line to the spirit world.⁸ The connection between electricity and the supernatural had gained wider public acceptance by the 1870s when many people became interested in Madame Blavatsky's Theosophy Movement, the teachings of which emphasized the connection between electricity and psychic phenomena.⁹ Then, from the late 1910s through the mid-1920s, many Americans indulged their fascination with spiritualism. At that time, Sir Oliver Lodge, a famous physicist, gave numerous public lectures on the connection between the radio and spiritualism. Consumers found it difficult to reconcile radio's ability to wirelessly transmit the human voice without turning to magic or miracles as an explanation. Lodge's insistence that radio could provide contact with the spirit world only reinforced the idea that the technology possessed supernatural characteristics. Through writings, lectures, and advertisements, the idea that electrification signified a miracle spread throughout the nation.¹⁰

Although Lodge's popularity had dwindled by the mid-1920s, manufacturers continued to emphasize the divine attributes of their products in advertisements. Electro String's advertising brochures exemplify this tendency. The front of the

⁸ Jeffrey Sconce, *Haunted Media: Electronic Presence from Telegraphy to Television* (Durham: Duke University Press, 2000), 21-23, 30.

⁹ David E. Nye, *Electrifying America: Social Meanings of a New Technology, 1880-1940* (Cambridge: The MIT Press, 1990), 152.

¹⁰ Douglas, *Listening In*, 41-47.

company's 1931 brochure beckoned consumers with the statement, "Brother musician listen to a MIRACLE!" This statement not only linked the company's instruments to the divine, but also functioned to exclude women through its invitation to brother musicians only. In the same brochure, Electro String also used the words "miracle" and "magic" and described the Spanish guitar as ethereal. The company claimed their instruments had been "touched with the magic wand of electrical genius," which provided Electro String's instruments with volume, the all-important quality other instruments lacked.¹¹ By 1936, the company had added the following tagline to their advertising brochures: "Rickenbacker Electro Instruments linked to the magic of Electro Amplification."¹²

Charlie Christian and the Birth of the Superstar

The magic of electrification transformed the guitar from a rhythm instrument to one worthy of the spotlight. Many historians consider Charlie Christian, jazz guitarist and champion of the electric guitar, the instrument's first star, and as such, Christian encouraged and inspired emulation.¹³ The existence of music stars and rock gods has greatly contributed to the gender gap in electric guitar performance. Stars

¹¹Rickenbacker International Corporation, "1931 Catalog."

¹² Rickenbacker International Corporation, "1936 Catalog," Literature Archive, http://www.rickenbacker.com/catalog_booklet.asp?pages=8&catalog=36 (accessed February 20, 2006).

¹³ Obrecht, "Charlie Christian."

and gods widen the gap in two main ways: 1) the exclusion of women through the emphasis on identification with a male deity and 2) promoting the idea that men are primarily producers and women are primarily consumers of technologies.

Many musicians considered the electric guitar to be a novelty during its early days. In 1939, Christian wrote an article that called on other guitarists to electrify their instruments. Christian charged that most bandleaders did not know how to use their guitarists effectively and relegated these musicians to rhythm parts, which gave guitarists little chance to demonstrate their musical artistry. Guitarists unwilling to trade creativity for a job keeping rhythm in a band often found themselves unable to earn a decent living as musicians. Through his membership in Benny Goodman's band and subsequent rise to stardom, Christian proved that "electrical amplification has given guitarists a new lease on life." In his article, Christian correctly predicted that electrical amplification would enable guitarists to demonstrate their talent and preferred styles of playing to the world. Years before rock 'n' roll emerged with its emphasis on the sound of the electric guitar, Christian assured fellow electric guitarists that "you continue to play guitar the way it should be played. And you'll make the rest of the world like it."¹⁴

¹⁴ Christian, "Guitarmen, Wake Up and Pluck! Wire for Sound; Let 'Em Hear You Play."

Rock Roots and Rock "Gods"

Rock 'n' roll grew out of the blues tradition, particularly the urbanized and electrified Chicago blues sound musicians such as Howlin' Wolf and Muddy Waters popularized in the 1940s. These guitarists among others created a sound that balanced the traditional Delta blues they had grown up playing with the electrified sound that urban audiences had begun to prefer. Blues lyrics and legends abound with tales of musicians striking deals at the crossroads, trading their souls to the devil for extraordinary musical skills. An aura of evil and violence encompassed common blues themes such as "destruction, the devil, demonic guitar-playing, drink, drugs, weapons—and general 'badness' permeating a performer's life and, with any luck, death too."¹⁵

In *Electric Guitar: History of an American Icon*, historian André Millard characterized the image of the bluesman as an updated version of the romantic hero in European culture. This emphasis on a single figure along with the prevalence of guitar solos in the blues foreshadowed the emergence of rock gods in the 1960s.¹⁶ Most white American audiences, however, did not become aware of the influence of Chicago bluesmen on rock 'n' roll until British musicians, such as the Rolling Stones, covered songs by American bluesmen and, thereby, introduced many white

¹⁵ Ruth Padel, *I'm a Man: Sex, Gods and Rock 'n' Roll* (London: Faber and Faber, 2000), 213.

¹⁶ Millard, after the collaborative paper with Rebecca McSwain, "The Guitar Hero," 144.

Americans to a piece of their nation's musical heritage.¹⁷ This sixties blues renaissance appropriated the violence glorified in the legends of its ancestors and made aggression "the defining note in rock sound."¹⁸

In *I'm a Man: Sex, Gods and Rock 'n' Roll*, poet and author Ruth Padel explored the metaphor of electric guitar hero as god of rock 'n' roll by comparing this figure to the heroes of Greek mythology. She argued that because rock culture is a product of Western culture, its myths and symbols are also rooted in Western culture, and contemporary Western myths of maleness, in particular, can be ultimately traced back to the Greeks.¹⁹ Padel asserted that "both rock and Greek mythology are the architecture of a highly aggressive male self-image crystallized in that word 'hero.'"²⁰ However, the differentiation and/or overlap of the concepts of the guitar hero and the guitar god are not always clear in rock criticism and scholarship. In "The Guitar Hero" and "Heavy Metal: From Guitar Heroes to Guitar Gods," two essays written after collaborative papers with anthropologist Rebecca McSwain, Millard defined both guitar heroes and gods as virtuosos, but argued that guitar gods took

¹⁷ David Szatmary, *A Time to Rock: A Social History of Rock 'N' Roll* (New York: Schirmer Books, 1996), 134-136.

¹⁸ Padel, *I'm a Man*, 213.

¹⁹ Ibid., 2, 12.

²⁰ Ibid., 23.

showmanship and spectacle to a level beyond that of mere guitar heroes.²¹ Both metaphors, however, denote figures worthy of idolatry and imitation.

Historians generally credit Chuck Berry as a pioneering figure in rock 'n' roll. Berry grew up in St. Louis, an urban area where electric instruments could be easily obtained. Although Berry has listed jazz and blues guitarists Charlie Christian, T-Bone Walker, and Muddy Waters among his influences, his music combined elements of African American and white pop music with those of the blues.²² Waters not only influenced Berry's sound, in 1955, he directed him to Chess Records where Berry subsequently recorded "Maybelline."²³ Although the music that followed, by artists such as Elvis Presley, Buddy Holly, and Jerry Lee Lewis, represented a revolution in popular culture at the time of its release, these early releases are staid compared to the rock 'n' roll sound that musicians developed in the late 1960s.

While guitar manufacturers had spent years perfecting designs that yielded sound free of feedback, rock 'n' roll musicians in the late 1960s exploited all of the sonic capabilities of their equipment. In order to reach the status of hero and ultimately god, an electric guitarist had to experiment with his equipment and come to

²¹"The Guitar Hero," 143; "Heavy Metal," 168-169.

²²Waksman, *Instruments of Desire*, 114, 148.

²³ Szatmary, *A Time to Rock*, 21.

redefine the instrument through his style of playing.²⁴ The use of wah-wah pedals, feedback, distortion, and various other electronic effects became commonplace, and musicians took volume to a new level by using columns of amplifiers.²⁵ Audiences came to look upon those musicians who could master what Waksman termed “the potential sonic chaos of the electric guitar” as not only heroes but guitar gods.²⁶ Given rock ‘n’ roll’s roots in the blues tradition with its legends of deals with the devil, the tendency of fans and critics to associate expert playing with the supernatural is not surprising. With this sort of folkloric past, rock guitarists who exhibited self-mastery over their instruments must be gods.

In order to earn the title of god, however, a guitarist needed to display skill along with an impressive image. The cover of *Axis: Bold as Love* by the Jimi Hendrix Experience, for example, depicted Hendrix as a Hindu god.²⁷ Due in part to the advent of long-playing records, guitarists in the 1960s renewed the importance and increased the length of guitar solos. Musicians in the 1970s further emphasized the otherworldliness of guitar players. They performed in costume and seemed to

²⁴ Millard, after the collaborative paper with Rebecca McSwain, “The Guitar Hero,” 143.

²⁵ Ibid., 154-155; Millard, “Playing with Power,” 137.

²⁶ Waksman, *Instruments of Desire*, 245.

²⁷ The Jimi Hendrix Experience, *Axis: Bold as Love*, Reprise, LP, 1967.

materialize onto the stage through clouds of smoke or the fog of dry ice.²⁸ Perhaps no other album of the early 1970s better exemplified the supernatural status of the rock star than David Bowie's 1972 release entitled *The Rise and Fall of Ziggy Stardust and the Spiders from Mars*. Several of its tracks told the story of Ziggy Stardust, a guitar god who let his fame go to his head. While the names of the mythical hero and his band clearly painted rock stars as not of this world, the opening and closing lines of "Ziggy Stardust" emphasized the more important fact that differentiated this mythical hero from mere humans, "Ziggy played guitar." The back cover of the album also instructed consumers that the album is "to be played at maximum volume."²⁹

Rock Stars and Earth Mothers: The Counterculture's Not What It Seems

While the idea of the rock god grew out of 1960s counterculture music, the counterculture shared the dominant tendency to marginalize women and did little to offer women participation beyond traditional gender roles. As interpreted by popular music scholar Sheila Whiteley, "both the lifestyle and the musical ethos of the period undermined the role of women, positioning them as either romanticized fantasy

²⁸ Millard, after the collaborative paper with Rebecca McSwain, "Heavy Metal," 177-178.

²⁹ David Bowie, *The Rise and Fall of Ziggy Stardust and the Spiders from Mars*, RCA, LP, 1972.

figures, subservient earth mothers or easy lays.”³⁰ Freedom for women consisted of free love, an idea easily conflated with the notion of the active female. However, since this freedom continued to be defined in terms of male sexuality, “a woman who wholeheartedly embraced the dictum of unlimited fucking remained, essentially, submissive.”³¹ Few women gained stardom in rock bands of the time, and those who did struggled with traditional notions of gender. Janis Joplin’s early demise has widely been documented to have been the result of her struggle to be “one of the boys”; Cass Elliott, whose weight prevented her from being sexualized within traditional notions of feminine beauty, was afforded a matronly image with the nickname “Mama Cass”; and Marianne Faithfull achieved more fame for abandoning her career in order to become Mick Jagger’s girlfriend.³² It should be noted that none of the counterculture stars listed above played the electric guitar; rather, they remained in the feminine-coded position of singer. The generation that created the rock god along with second wave feminism simultaneously embraced traditional gender roles, which maintain barriers that prevent women from achieving success as electric guitarists.

In terms of rock ‘n’ roll, these traditional gender roles dictate that woman’s place remain that of fan or groupie. If a woman breaks these barriers and joins a rock

³⁰ Whiteley, *Women and Popular Music*, 23.

³¹ *Ibid.*, 54.

³² *Ibid.*, 23-24.

band, gender roles tend to relegate her to a supporting position, such as singer or bass player. Although singers receive much of the spotlight, most do not achieve the same level of adulation as electric guitarists. Fans and critics simply do not spend hours in debate over vocal gods and goddesses in the manner in which they argue over guitar gods. Those female musicians who do play the electric guitar face many obstacles to gaining recognition for their talent. Only one of these obstacles is the fact that her gender, according to dominant social and moral values, places her at a disadvantage in the quest for god-like status.

Binary Systems: Glam Stars and Genderbending

In any conversation about gender and rock 'n' roll, someone is bound to pose the question, "What about glam rock?" Exemplified by Bowie's Ziggy Stardust persona, glam rock was a 1970s phenomenon wherein male rock stars donned feminine clothing and makeup. The genre paved the way for pop metal bands that would become popular in the 1980s such as Twisted Sister and Poison, to whom critics now mockingly refer as hair bands due to band members' preferences for long, teased hair. While the genre certainly opened doors that allowed men to experiment with gender boundaries, this gender play hardly resulted in any actual transgression. While Whiteley correctly pointed out that "the 'reality' of any identity is questionable," in *Performing Glam Rock: Gender and Theatricality in Popular Music*, Philip Auslander argued that glam rock "offered no substantial challenge to

the conventions of rock as a traditionally male-dominated cultural form that evolved from male-dominated social contexts.”³³

Auslander, a scholar of performance studies, analyzed the performance of gender in Bowie’s last performance as Ziggy Stardust, which took place at the Hammersmith Odeon on July 3, 1973. Despite their glittering costumes and makeup, Bowie and Mick Ronson, the lead guitarist, reinforced traditional gender roles with Bowie playing the feminized singer and Ronson as the (unquestionably masculine) guitar hero. Although Bowie plays several instruments, he took on the more feminine role of singer and only played the acoustic guitar, a feminine-coded instrument, in public during the Ziggy years. Auslander noted that Bowie ingratiated himself to both the audience and Ronson and even ceded the stage during one of Ronson’s guitar solos. Although Bowie appeared to embody femininity as Ziggy Stardust, Auslander astutely argued that Bowie’s frequent changes of costumes and personae showed that he expected neither himself nor his audience to take his feminine identity seriously.³⁴

As with other genres of rock ‘n’ roll, women in glam rock remained almost entirely behind the scenes or in the audience. Auslander noted that the wives of glam rockers acted as muses, social secretaries, managers, and stylists to their husbands.

³³ Philip Auslander, *Performing Glam Rock: Gender and Theatricality in Popular Music* (Ann Arbor: University of Michigan Press, 2006), 229; Whiteley, *Women and Popular Music*, 16.

³⁴ Auslander, *Performing Glam Rock*, 138, 140-141, 146-147.

Glam offered female fans an image of a man they could both desire and emulate (at least in terms of fashion). Despite claims that glam rock's genderbending created a safe space for unconventional performances of both male and female gender, only one female musician, Suzi Quatro, took this performance to the stage.³⁵

Quatro, who played bass guitar and dressed in leather, is both lauded and derided by critics for her performance of gender. As a woman and the only one to appear in the canon of glam rock, critics draw her authenticity as both a musician and a woman into question. Critics have labeled Quatro with terms such as "female cock rocker" or commented on her display of "female masculinity" rather than having allowed her to express an image of femininity that lies outside traditional notions of her gender.³⁶ Critics who point out that professional songwriters fed Quatro many of her songs also call into question her authenticity as a musician.³⁷ Quatro faced criticism for the construction and maintenance of her onstage persona, acts which were the basis for the appeal of contemporary male musicians such as Bowie. Critics and fans who insist on assigning women musicians to the more gender appropriate and less threatening role of sex object also call into question these musicians' authenticity. Rock history abounds with stories from women musicians of all

³⁵ Ibid., 195-196.

³⁶ Ibid., 222.

³⁷ O'Brien, *She Bop II*, p. 120.

generations about fans who demanded that the musicians strip rather than play. Although men may have molded her music, Quatro maintained control of her sexuality, most explicitly when she posed as a centerfold in a 1974 issue of *Penthouse* fully clothed.³⁸ Quatro, whose eventual role as Leather Tuscadero (sidekick to the Fonz) on *Happy Days* seems to have made more of an impact on critics than her music, deserves a place in the rock historical canon as a “disruptive diva” who used her performance “to create tensions among discourses of masculinity and femininity,” and, thereby, provided an alternative to the acoustic singer-songwriters and disco queens prevalent in the 1970s.³⁹

Woman (Musician) as Other

The example of Suzi Quatro demonstrates how a woman’s entrance into a traditionally masculine domain marks her as an intruder and leads to the assumption that her presence is inherently inauthentic. Auslander noted that, in rock, male musicians are assumed authentic until proven otherwise whereas female musicians must always prove their authenticity.⁴⁰ All rock stars engage in the creation of a

³⁸ Raha, *Cinderella’s Big Score*, 62.

³⁹ Ibid.; Auslander, *Performing Glam Rock*, 222.

⁴⁰ Auslander, *Performing Glam Rock*, 204.

persona; critics simply tend to overlook the façade in male rock musicians.⁴¹

Questioning the authenticity of female musicians, however, is simply a means of defusing them as a threat to the traditional gender order. Furthermore, concepts like “female masculinity,” rather than creating a space for emancipatory genderbending, actually limit the number of culturally acceptable gender representations by reinforcing traditionally narrow and conservative definitions of gender.

Man/woman and masculinity/femininity are culturally coded as binary oppositions, which lead to defining the genders in terms of their differences from one another. With biblical roots illustrating that man is the origin of humanity, woman is shown as derivative of man and stands in contrast to him as “other.” Additionally, the active/passive binary relationship is an essential aspect of religious dichotomies and is present in other oppositions such as pure/impure and controllable/uncontrollable. Within this symbolic order, passive (controllable) women are constructed as normal whereas active women are constructed as uncontrollable and therefore unnatural.⁴² If man represents universal humanity, woman, due to her differences from man, can only represent particularities. In rock ‘n’ roll and other pursuits, these notions of particularity lead critics to treat women musicians as exceptional. Art historian Nanette Salomon argued that “the

⁴¹ Ibid., 199.

⁴² Whiteley, *Women and Popular Music*, 52-53.

‘exceptional’ woman artist may be one of the most insidious means of undermining the likelihood of women’s entering the creative arts.”⁴³

Women’s entrance into traditionally masculine realms upsets the status quo by threatening both the male domination of certain fields and the primacy of the gender binary system. Since the definition of woman in terms of her relationship to man arose out of patriarchal structures of culture and language, femininity is defined in a way that creates an idealized and heteronormative reflection for man. In other words, traditionally acceptable forms of femininity are those with images that reflect the feminine stereotypes imposed upon women by an androcentric culture. This means, men should look and act like men; i.e., active, competitive, tough, and always the victor. Women, on the other hand, should look and act like women; i.e., fragile and desirable (but only to men and never as the desirer).⁴⁴ Since woman’s biology has been patriarchally defined through her absence of a penis, woman’s sexuality is often defined as a lack, as the absence of the male’s sexuality.⁴⁵ The active/passive binary is present in such definitions of sexuality wherein women are allowed to embody desire only as objects of male sexuality. Active women who exhibit traits of

⁴³ Nanette Salomon, “The Art Historical Canon: Sins of Omission,” in *The Art of Art History: A Critical Anthology*, ed. Donald Preziosi (New York: Oxford University Press, 1998), 348, 351.

⁴⁴ Whiteley, *Women and Popular Music*, 53, 66, 122, 155.

⁴⁵ *Ibid.*, 119.

competitiveness and strength and express themselves as not simply desirable but also as desiring are labeled as deviant within the traditional order of gender.⁴⁶ Auslander outlined the dangers of such deviation in his assertion that “when a masculinely coded performance style is juxtaposed with a femininely coded body...figure-ground reversals that subvert reified masculine and feminine identities become possible.”⁴⁷ The easiest ways to combat such transgressions is to ignore or belittle them. As Whiteley noted, “woman is either passive, or she doesn’t exist.”⁴⁸

⁴⁶ Ibid., 66.

⁴⁷ Auslander, *Performing Glam Rock*, 217.

⁴⁸ Whiteley, *Women and Popular Music*, 155.

CHAPTER 5

WHY HAVE THERE BEEN NO GREAT WOMEN ELECTRIC GUITARISTS?

The redefinition of the electric guitar in terms of the female musician represents the success on one of the final frontiers of the women's movement: the deconstruction and reconstruction of macho culture and its signifiers.¹—John Strohm

Cultural values have not always excluded women from playing the guitar. At least as early as the sixteenth century, paintings and illustrations depicted women playing guitars, and European cultural values held that guitar playing was a feminine pastime. The guitar continued to be a popular instrument among women throughout the nineteenth century. Women tended to play in the privacy of their own homes rather than give public performances, though.² The guitar grew in size and weight during the early twentieth century, and the number of female players declined.³ The 1930s spawned a handful of female blues guitarists, but with the electrification of the

¹ Strohm, 183.

² Millard, after the collaborative paper with Rebecca McSwain, "The Guitar Hero," 157.

³ Strohm, 184.

instrument, the guitar fell into predominantly male hands.⁴ Although the 1936 Electro String advertising brochure featured a female group called Sweethearts of the Air, audiences considered female guitarists a novelty.⁵ Except for the occasional novelty act, the early days of rock 'n' roll featured no notable female electric guitarists. To this day, cultural values still largely hold that the only guitar acceptable for a woman is an acoustic one. Although women are playing the electric guitar in increasing numbers, the instrument's macho image remains.⁶ The fact that critics and audiences continue to emphasize gender when talking about female guitarists illustrates that, to a large extent, women playing electric guitars continue to be a novelty in the music industry. Such treatment of female electric guitarists demonstrates the persistence of the idea that this technology is inherently masculine.⁷ Therefore, women who play the electric guitar challenge the patriarchal power structure of the music industry and larger society. A woman can invalidate claims that electric guitar technology and rock 'n' roll are exclusively masculine domains by

⁴ Millard, after the collaborative paper with Rebecca McSwain, "The Guitar Hero," 158.

⁵ Strohm, 184-185; Rickenbacker International Corporation, "1936 Catalog."

⁶ Strohm, 183.

⁷ Oldenziel, *Making Technology Masculine*, 10.

taking the stage and playing the electric guitar.⁸ Getting to the point of being able to take the stage, however, is not that simple. Public performance of the electric guitar requires not only drawing attention to oneself, but also doing it loudly. These traits have no place in a society that values women as passive consumers. When Patricia Kennealy-Morrison wrote about her fantasy of getting onstage and playing “forty-five minutes of the indisputedly finest rock guitar ever heard anywhere” and then retiring from music, her fantasy was not directed at her inability as a woman to wield an electric guitar. Rather, it was directed toward her inability as a woman to wield that kind of freedom and power.⁹

Images of Women

Judging from the virtual invisibility of female guitarists in mainstream popular culture, women still lack such freedom and power. A recent exhibit on the history of the electric guitar sponsored by the Smithsonian claimed that “thanks to pioneers like Bonnie Raitt, women have earned an equal place in what had traditionally been a male-dominated field.”¹⁰ Yet a companion program to the exhibit made reference to

⁸ Lisa L. Rhodes, *Electric Ladyland: Women and Rock Culture* (Philadelphia: University of Pennsylvania Press, 2005), xv.

⁹ Patricia Kennealy-Morrison, “Rock Around the Cock,” in *Rock She Wrote*, ed. Evelyn McDonnell and Ann Powers (New York: Delta, 1995), 357-363.

¹⁰ Smith and Sturm, “From Frying Pan to Flying V.”

eleven guitarists, only one of whom was female.¹¹ The claim of equality is premature given the fact that Bonnie Raitt is the only female guitarist mentioned in either the exhibit or companion program. A quick glance at *Rolling Stone*'s list of "The 100 Greatest Guitarists of All Time" also demonstrates the extent of inequality between the recognition given to male and female guitarists. Only two women appeared on the list. Joni Mitchell, an acoustic guitarist, achieved 72nd place, and Joan Jett, an electric guitarist, achieved 87th place.¹²

Although *Rolling Stone* publicized the list in 2003, by its March 2006 issue, *Guitar Player* still pictured virtually no women within its pages. Not including the classified ads at the back of the magazine, the advertisements in the issue featured three drawings and one hundred and fifteen photographs of men and one drawing and five photographs of women. Only one of the advertisements showed a woman holding an instrument, but the ad was selling leather guitar straps and the woman's guitar was acoustic. Additionally, only two articles focused on female musicians, while approximately ten articles concerned male musicians.¹³

¹¹ Radio Smithsonian, "Background."

¹² *Rolling Stone*, "The 100 Greatest Guitarists of All Time," August 27, 2003, http://www.rollingstone.com/news/story/5937559/the_100_greatest_guitarists_of_all_time (accessed April 16, 2006).

¹³ *Guitar Player*, March 2006.

Unfortunately, it appears that two articles about female musicians is above average for *Guitar Player*, a magazine that has been published since 1967. Despite having a female editor for its first two issues, the inaugural issue of the magazine features no articles about female musicians and offers only two photographs of women. These photographs are located in the "Players Reply" column, and the women, reportedly a 28-year-old housewife and a 20-year-old secretary, offer their opinions about what has contributed to the popularity of the electric guitar without giving any indication as to whether or not they are musicians themselves. More disturbing, though not surprising, is an article about an international guitar festival being planned by the magazine's creator, L.V. Eastman. The article announced plans for the crowning of "Miss Guitar World," who would be chosen from the female players attending the festival and judged for her talent as well as beauty.¹⁴

Although the number of women pictured within the pages of *Guitar Player* has increased during the last 40 years, the images and content of the magazine remain skewed as overwhelmingly male. Moreover, the vast majority of images of women are contained in advertisements for guitar strings and other products as opposed to appearing in articles about female musicians. Women, if pictured with instruments at all, are most often pictured with acoustic guitars; however, the electric bass is also an acceptable feminine-coded instrument. During the 1970s, women remained either sex

¹⁴ *Guitar Player A Facsimile Edition of the First Year of "Guitar Player Magazine"* (Saratoga, CA: Guitar Player Productions, 1975).

objects or invisible in the publication. The same issue that featured Carol Kaye, an electric bass player and studio musician, among the top artists of 1972 also featured an amplifier ad that depicted a topless woman in a g-string leaning against a man who had his right arm around her waist, an electric guitar in his left hand, and his left foot perched triumphantly upon the amplifier. This issue also featured an ad for strings that bore the silhouette of a naked dancing woman. The March 1974 issue featured no articles about or images of women.¹⁵

Although beauty is still emphasized in ads featuring women, the number of ads featuring female musicians is increasing even if they are usually not pictured as electric guitarists. The images also appear to be moving away from the degrading and toward the empowering. For example, the March 2007 issue featured two pictures of a woman who repairs guitars and an ad for the North American Rock Guitar Competition, which depicted a little girl on a stage in front of an empty auditorium, a toy guitar strapped to her back, and her left hand pointing to the imaginary crowd underneath the phrase, "You've always wanted it...*Be a Rock Star!*"¹⁶ While one may consider it an advance that advertisers, at least in the publication examined, are no longer using images of women as groupies to appeal to male guitarists, the fact that the publication has historically contained only one article

¹⁵ Ibid.; *Guitar Player*, March 1970; *Guitar Player*, March 1972; *Guitar Player*, March 1973; *Guitar Player*, March 1974; *Guitar Player*, March 1975.

¹⁶ *Guitar Player*, March 2007.

per issue on a female musician points to a continued and disheartening lack of female role models within the pages of guitar magazines.

Barriers to Greatness

In 1971, feminist art historian Linda Nochlin published an essay entitled “Why Have There Been No Great Women Artists?” Although the essay concerned visual artists, her arguments can easily be applied to the historical treatment of women musicians. First, Nochlin argued that critics reinforce the negative implications of the question by attempting to answer it as it is framed. In other words, feminists often make the mistake of answering the question by digging up examples of underappreciated female artists, which is illustrated by the plethora of books concerning women in rock that continue to be published. While it is important for scholars to draw attention to worthy female artists and musicians, the feminist scholar’s work cannot end with the simple excavation of these figures. The danger with not taking the answer far enough is that the existence of these biographies can give the illusion that women have achieved equality within the field; in which case, as Nochlin pointed out, the status quo is fine as it is.¹⁷ This increase in the amount of scholarly attention devoted to female musicians may lead some to believe that women electric guitarists have achieved or come close to equality with men in terms of

¹⁷ Linda Nochlin, “Why Have There Been No Great Women Artists?” in *Women, Art, and Power and Other Essays* (New York: Harper & Row, Publishers, 1988), 148-149.

recognition for their performances; however, the truth is that, in comparison to their male counterparts, female electric guitarists have merely reached “the lower rungs of previously inaccessible ladders.”¹⁸ An alternate attempt to answer the question asserts that what constitutes greatness for women is different than it is for men, which leads to the assumption that there is an essentially feminine style. Such assumptions lead critics to lump all female musicians together simply by virtue of their gender and ignore the fact that these musicians actually have more in common with other musicians of their genre and era than with each other.¹⁹

Paralleling Nochlin’s arguments concerning visual artists, one can make the claim that there really have been no great women electric guitarists. The problem lies not in the fact that all the great players have remained hidden, but in the fact that women have institutionally been prevented from becoming great electric guitarists. As in other professions, women electric guitarists must contend with a glass ceiling, that invisible barrier that blocks them from reaching the top.²⁰ Institutional barriers include a lack of female role models, traditional constructions of gender, and the masculinization of technology in general and audio technologies in particular. Beginning with the passage of instrument-making skills from fathers to sons or young

¹⁸ Pamela Walker Laird, *Pull: Networking and Success since Benjamin Franklin*, (Cambridge, MA: Harvard University Press, 2006), 288.

¹⁹ Nochlin, “Why Have There Been No Great Women Artists?” 148-149.

²⁰ Laird, *Pull*, 288.

male apprentices and continuing through the masculinization of home audio experiments and rock 'n' roll during the twentieth century, women have largely been deprived of the educational opportunities and encouragement that would lead them to pick up electric guitars let alone attempt to make a career out of playing one.²¹ The reality is that great achievement is rare for men, too; however,

it is still rarer and more difficult if, while you work, you must at the same time wrestle with inner demons of self-doubt and guilt and outer monsters of ridicule or patronizing encouragement, neither of which have any specific connection with the quality of the art work as such.²²

As Nochlin asserted, the answer to the question she posed has nothing to do with individual genius; rather, the answer lies "in the nature of given social institutions and what they forbid or encourage in various classes or groups of individuals."²³

While the masculinization of technology has allowed men to consider any woman an amateur in a traditionally male-dominated field, Nochlin pointed out that accusations of amateurism are also connected to a perceived lack of commitment on the part of women. This lack of commitment is alleged most notably when a woman chooses to leave or interrupt her musical career in order to focus on her marriage and family. Despite any advances women have made in terms of opening career fields over the last 40 years, Nochlin's assertion that the only role social institutions consign

²¹ Nochlin, "Why Have There Been No Great Women Artists?" 163.

²² Ibid., 176.

²³ Ibid., 158.

women to immediately is that of wife and mother still holds true. Unlike men, women face criticism and other barriers that present career and family as an either/or proposition.²⁴ For example, after the birth of her daughter, interviewers repeatedly asked Suzi Quatro if motherhood meant that she would soften her image or retire from rock altogether. As Auslander noted, interviewers never thought to ask these same questions of David Bowie (or any other male musician, for that matter) after the birth of his children.²⁵

Moe Tucker, former drummer for the Velvet Underground, serves as a prime example of how cultural pressures to choose family over work can impact a woman's career in rock 'n' roll. Tucker left the Velvet Underground in 1969 and did not record again until the early 1980s. In the meantime, she married, had five children, and moved back to Georgia to be near her mother after her marriage ended. Her first tour as a musician and a mother lasted 6 weeks, which Tucker has recounted was simply too long for her, her mother, and the children. This realization led her to postpone booking any tours that lasted more than a month until her children were older.²⁶ Despite Tucker's assertion that diapers and bath time "just ain't rock 'n' roll," the real root of her dilemma lies in the fact that traditionally childrearing

²⁴ Ibid., 166-167.

²⁵ Auslander, *Performing Glam Rock*, 213.

²⁶ O'Brien, *She Bop II*, 110-111.

responsibilities fall disproportionately to the mother.²⁷ Only when fatherhood becomes culturally coded in such a way that men are expected to share equally in childrearing with women, will interviewers even think to ask male musicians what impact fatherhood will have on their careers. Until equality is achieved in terms of parenting, it is likely that women will continue to face social pressure to choose either family or career and also encounter criticism no matter what their decision.

Creating Female Space

In spite of the barriers facing women's entrance into music performance, especially that of the electric guitar, some women have been able to create space for other women within music. The most visible examples are women's music festivals, but punk rock, riot grrrl, and rock camps for girls have also created spaces in which girls and women can feel encouraged and comfortable while creating music.

Women's music festivals grew out of second wave feminism's interest in exploring women's culture. These festivals provided encouragement and opportunities to women both onstage and behind the scenes who had previously been denied access to instruments and other sound gear due to a lack of economic power and other barriers

²⁷ Ibid., 111.

that prevented women from learning to use such equipment.²⁸ Although the original women's music festivals took place during the 1970s, the advent of Lilith Fair in 1997 illustrated that women still lacked sufficient space and visibility within the music industry. Named after Eve's predecessor, who, according to myth, God expelled from the Garden of Eden because she dared to act as Adam's equal, Lilith Fair was in part a response to male-dominated music festivals such as Lollapalooza.²⁹ The festival, however, faced criticism for its bias towards white women who played acoustic rock or folk pop.³⁰ While Lilith Fair certainly created a space supportive of women as both producers and consumers of music, its promotion of traditionally feminine artists playing feminine-coded acoustic instruments did nothing to challenge the traditional gender order, which continues to keep such women from achieving equality both in and out of the music industry. Furthermore, the very concept of "women's music" buys into the notion that there is an essentially feminine aspect of music created by women, which prevents the music from sharing critical space with that created by men.

²⁸ Boden Sandstrom, "Women Mix Engineers and the Power of Sound," in *Music and Gender*, eds. Pirkko Moisala and Beverley Diamond (Chicago: University of Illinois Press, 2000), 292-293, 297.

²⁹ Raha, *Cinderella's Big Score*, 225.

³⁰ O'Brien, *She Bop II*, 470-471.

In an essay on women guitarists, John Strohm, former bass player for a predominantly female indie rock band called the Blake Babies, argued that punk rock offered the “greatest breakdown of the gender rules in the history of rock.”³¹ Despite being based on a seemingly all-inclusive DIY ethic, women in the punk and indie undergrounds still face many of the same barriers as their mainstream counterparts. At its best, the punk ethos creates a space in which marginalized voices can be heard, and while it may tolerate a wider range of voices than mainstream music and culture, punk has yet to fully escape the influence of patriarchy and traditional gender roles. As in other parts of society, punk communities must contend with misogyny, homophobia, racism, and self-righteousness.

Hardcore offers a prime example of the ways in which punk has failed to escape traditional gender roles. Although a certain amount of aggression marks all punk music, hardcore took this aggression to another level with bands offering a sound that was faster, louder, and harder than that of their predecessors. *American Hardcore*, a recent documentary on the scene, features appearances by only four women, two of whom are musicians while the other two are simply described as having been part of the scene. The point these women make is that although women were virtually absent from the hardcore stage, they were present as documentarians of

³¹ Strohm, 187.

the scene, acting as photographers and publishing zines.³² In other words, women in hardcore were relegated to the roles of fan or groupie just as in mainstream rock. Kira Roessler, former bass player for Black Flag, although reportedly recruited by the band because of her musical ability, still encountered patriarchal attitudes from her bandmates. She recounted that singer Henry Rollins repeatedly assured her that membership in the band did not mean the rekindling of their romantic relationship. Such an act implies that a woman's main interest in joining a band is to get closer to a man and calls into question the authenticity of the woman's desire to create music. She also recounted feeling alienated when the band released an album bearing misogynistic cover art and had to face encouragement from her bandmates to abandon her jeans and t-shirts in favor of sexier, more feminine clothing.³³

As music journalist Maria Raha pointed out, women who criticize punk from within the community find themselves "in the uncomfortable position of loving music and art that makes us, at times, feel marginalized, yet it's still what we most closely identify with, the art we are captured by, the music that possesses us."³⁴ Roessler's experiences as a female musician in the hardcore scene exemplify this uncomfortable

³² *American Hardcore: The History of American Punk Rock, 1980-1986*, DVD, directed by Paul Rachman (Sony Pictures Classics, 2006).

³³ Ibid.; Michael Azerrad, *Our Band Could Be Your Life: Scenes from the American Indie Underground, 1981-1991* (Boston: Little, Brown and Company, 2001), 46, 56-57.

³⁴ Raha, *Cinderella's Big Score*, x.

position. On a more positive note, punk's rejection of the necessity of musical virtuosity is, in part, a reflection of an underlying assumption that everyone can and should make a contribution to the community. In the same spirit, the underground has always offered images that counter traditional notions of femininity.³⁵

Riot Grrrls and Angry Women

The riot grrrl movement was one way in which the underground offered women space to express unconventional images of femininity. Unfortunately, critics usually construct the history so that the movement appears to be derivative of male-dominated punk rock.³⁶ Such a construction reinforces the assumption that music created by men is authentic while that created by women must prove that it is so. It also fails to account for the fact that riot grrrl bands have more in common with male musicians of the underground than with their mainstream female contemporaries.

Although generally traced to female bands coming out of Olympia, Washington, and Washington, D.C., around 1991, riot grrrl was intended as a feminist, political movement of which music was merely one component. In an essay entitled "'Rebel Girl, You are the Queen of My World': Feminism, 'Subculture,' and Grrrl Power," scholar of popular music Marion Leonard described riot grrrl as a

³⁵ Ibid., xiii.

³⁶ Judith Halberstam, "What's That Smell? Queer Temporalities and Subcultural Lives," in Whiteley and Rycenga (New York: Routledge, 2002), 18.

network because the term denotes an interconnection without suggesting “a singular voice or aim.”³⁷ Kathleen Hanna, who headed both a riot grrrl band and a zine named Bikini Kill, authored and published the Riot Grrrl Manifesto.³⁸ The manifesto contradicted the notion that young women growing up in the United States of the 1990s were living in a postfeminist era. It outlined a wide variety of reasons that a new feminist movement was necessary, such as, “BECAUSE we are angry at a society that tells us Girl=Dumb, Girl=Bad, Girl=Weak.”³⁹ Riot grrrl recognized that young women continued to face abuse, rape, eating disorders, and other topics generally considered taboo. Through zines, music, and art, the movement sought to create a safe space for girls to discuss their experiences and redefine girlhood on their own terms.⁴⁰

Whiteley has argued that:

if...women exist only in men's eyes, as images, then
they should take the images, magnify them, and reflect
them back. Conformity to image, to representations of

³⁷ Marion Leonard, “‘Rebel Girl, You are the Queen of My World’: Feminism, ‘Subculture,’ and Grrrl Power,” in *Sexing the Groove: Popular Music and Gender*, ed. Sheila Whiteley, (New York: Routledge, 1997), 231.

³⁸ Kristen Schilt, “‘A Little Too Ironical’: The Appropriation and Packaging of Riot Grrrl Politics by Mainstream Female Musicians,” *Popular Music and Society* 26, no. 1 (2003): 5-16.

³⁹ Kathleen Hanna, “Riot Grrrl Manifesto,” <http://www.infoshop.org/youth/index.php?name=sections&req=viewarticle&artid=25> (accessed October 5, 2007).

⁴⁰ Raha, *Cinderella's Big Score*, 160-161.

established femininity can then become so exaggerated as to become confrontational.⁴¹

Some riot grrrls preempted sexual objectification by adopting a particularly feminine style of dress and/or scrawling words such as “slut” across their arms or torsos.⁴²

Cultivating a conspicuous display of girlishness was one way in which some riot grrrls critiqued the traditional construction of femininity offered through popular media. While visually reflecting back to mainstream society a notion of girlhood in which emphasis is placed on carefree innocence and pregnancy, rape, and abuse do not exist, riot grrrls used zines and music to explore and expose the ways in which mainstream society ignores lived experiences of girlhood that fall outside such sanitized notions.⁴³

As sociologist Kristen Schilt argued in an article on the mainstream’s appropriation of riot grrrl culture, the movement revolutionized the idea that girl culture begins and ends in the bedroom by “making the bedroom a place to produce zines, hold all-girl meetings, or play guitar.”⁴⁴ In the same vein, communication

⁴¹ *Women and Popular Music*, 122.

⁴² Leonard, 235.

⁴³ Gayle Wald, “Just a Girl?: Rock Music, Feminism, and the Cultural Construction of Female Youth,” in *Rock Over the Edge: Transformations in Popular Music Culture*, ed. Roger Beebe, Denise Fulbrook, and Ben Saunders (Durham: Duke University Press, 2002), 193; Whiteley, *Women and Popular Music*, 122.

⁴⁴ Schilt, “‘A Little Too Ironic,’” 14.

studies professor Susan J. Douglas argued that music provides an important outlet for girls with the following statement:

But in their rooms with their boom boxes, whether they're listening to bubble gum or punk, teenage girls can imagine a world where they can have love and respect, where boys desire them but won't mess with them.⁴⁵

Through their performances, riot grrrl bands attempted to make the imaginary world described by Douglas a reality. One way in which riot grrrl bands accomplished this was by issuing requests that girls and women stand near the front of the stage, a space normally dominated by males. If male audience members did not comply with such requests, the women on stage had the power to halt the show until they could perform to the faces of female audience members.⁴⁶ Riot grrrls' pro-female attitude, however, should not be interpreted as necessarily inclusive of an anti-male attitude. While some self-described riot grrrls may have ascribed to brands of feminism that upheld anti-male sentiments, the common goal of the riot grrrl network was to mobilize girls to meet together, engage in activities such as the production of music and zines, open

⁴⁵ Susan J. Douglas, "Girls 'n' Spice: All Things Nice?" in *Mass Politics: The Politics of Popular Culture*, ed. Daniel M. Shea (New York: Worth Publishers, 1999), 48.

⁴⁶ Leonard, 233-234.

lines of communication, offer new modes of feminine expression, combat sexism in their daily lives, and rearticulate girlhood in their own terms.⁴⁷

Although riot grrrl received widespread coverage in the mainstream press in the early 1990s, many writers attempted to defuse the radical potential of the network by trivializing its goals and methods of attaining them or focusing on the shock value of members who “betrayed specific conventions of femininity.”⁴⁸ Other journalists trivialized riot grrrl by conceptualizing it solely in terms of fashion or as merely a feminine subgenre of punk rock.⁴⁹ Some journalists, uncomfortable with the movement’s promotion of multiple feminisms, commented that the network should halt all activity until its members had familiarized themselves with feminist theory. Leonard argued that such comments should be read as “a gendered response as previous youth subcultures have not had to intellectually contextualize their dissatisfaction.”⁵⁰

By the mid-1990s, mainstream press had all but forgotten about the riot grrrl phenomenon. This loss of interest in riot grrrl was due in part to a blackout initiated by the network in 1993 after its causes had been continually distorted or

⁴⁷ Ibid., 239, 241, 243; Wald, *Just a Girl?*, 200.

⁴⁸ Leonard, 241-243.

⁴⁹ Mary Celeste Kearney, “The Missing Links: Riot Grrrl—Feminism—Lesbian Culture,” in *Sexing the Groove: Popular Music and Gender*, ed. Sheila Whiteley (New York: Routledge, 1997), 208; Leonard, 246.

⁵⁰ “‘Rebel Girl, You are the Queen of My World,’” 243, 249.

misrepresented in the popular press in both the United States and the United Kingdom.⁵¹ The mainstream press turned its focus instead on promoting a group of more accessible and acceptable female musicians who came to be deemed the angry women of rock. Alanis Morissette, Fiona Apple, Meredith Brooks, Tracy Bonham, and a host of others comprised “a string of attractive young women armed with guitars and a softer, cleaner feminist bent that tidied up riot grrrl’s grit.”⁵² These artists channeled their anger through acceptably postfeminist images, which meant they gave the illusion of feminist independence while clinging to traditional feminine ideals.⁵³ Raha summed up the postfeminist contradictions of these angry women as follows: “for all their whispered ‘fuck you’s, they teetered on a feminist tightrope, revealing both their strongest and most stereotypical sides when it came to love and rejection.”⁵⁴

The danger of postfeminist imagery lies in its redefinition of “femininity, feminism, and even masculinity in relation to racist, class-bound, and patriarchal models of gender and sexual identity.”⁵⁵ Postfeminism defuses advances toward the

⁵¹ Kearney, 209.

⁵² Raha, *Cinderella’s Big Score*, 223.

⁵³ *Ibid.*, 227.

⁵⁴ *Ibid.*, 224.

⁵⁵ Amelia Jones, “Postfeminism, Feminist Pleasures, and Embodied Theories of Art,” in Preziosi, 387.

acceptance of polysemic femininity by falsely promoting the notion that society has moved beyond feminism. This promotes the idea that women have earned the right to choose to embrace traditional gender roles, and this notion acts to suppress other forms of feminism.⁵⁶ As argued throughout this paper, the greatest barriers to women achieving equality in any field are those social institutions that reinforce the binary opposition of gender. Until society recognizes the existence of multiple viable representations of both masculinity and femininity, women will continue to be viewed as outsiders in male-dominated fields.

Despite all efforts, postfeminism and its palatable versions of female anger have not succeeded in defusing the underground's drive to embrace polysemic femininity. Raha asserted:

As long as sort-of-angry-but-still-camera-and-fashion-friendly women like Gwen Stefani receive mainstream accolades for being 'different,' there will always be room for one more story about intelligent, questioning, truly subversive, sometimes feminist, angry, hard-working, creative individuals transgressing cultural boundaries.⁵⁷

Although the popularity of riot grrrl bands waned in the mid-1990s, Judith Halberstam noted that they paved the way for bands that "were queer, female, and

⁵⁶ Ibid., 388.

⁵⁷ Raha, *Cinderella's Big Score*, xix.

loud.”⁵⁸ In particular, Sleater-Kinney, offered new images of feminine musical performance by doing away with the feminine-coded electric bass. The all-female trio consists of a drummer and two electric guitarists.⁵⁹ Although the mainstream may not offer images of women that do much to challenge the traditional gender order, as long as it feels the need to answer the underground by providing more acceptable images of femininity, the fact remains that women become more visible as musicians. While most self-respecting feminists shudder at the thought that contrived groups such as the Spice Girls may serve as role models to young girls, Douglas argued that ridiculing an adolescent girl’s embrace of such a group could be detrimental and disempowering.⁶⁰ If girls are encouraged and supported wherever they find a voice, it is likely that they will grow into women who respect the existence of multiple femininities.

No Future? The Feminist Legacy of Punk Rock

Although critics often classify the riot grrrl movement as a phenomenon with little influence beyond the mid-1990s, evidence suggests that the movement’s legacy has yet to be fully realized. This ongoing legacy is revealed in the title of a November 19, 2006, article in the *New York Times*: “Mama Was a Riot Grrrl? Then

⁵⁸ Halberstam, 15.

⁵⁹ Ibid.

⁶⁰ Douglas, “Girls ‘n’ Spice: All Things Nice?” 48.

Pick Up a Guitar and Play.” As the article notes, successful bands comprised of preteens and teenagers can be found throughout the history of rock ‘n’ roll. The difference today is that many preteens have parents who listened to and/or played in punk, riot grrrl, or indie rock bands. Instead of listening to mainstream pop music, these kids are being influenced by bands such as Bikini Kill and Sleater-Kinney, which they can easily locate in their parents’ record collections. The article goes on to note that these kid-core bands are far from novelty acts; almost every weekend 10- to 17-year-olds can be found playing shows in New York City venues and the CMJ music marathon has even dedicated a showcase to all-kid bands.⁶¹

Another way parents are encouraging their daughters to pick up instruments is by sending them to music-related summer camps. Since 2000, dedicated volunteers have started summer camps and after-school programs aimed at girls ages 6-18 across the United States as well as in Sweden and the United Kingdom. In 2000, Misty McElroy founded the Rock ‘n’ Roll Camp for Girls (RnRC4G) in Portland, Oregon, which influenced the development of other such camps and spawned the creation of the Girls Rock Camp Alliance (GRCA) in February 2007.⁶²

⁶¹ Jessica Pressler, “Mama Was a Riot Grrrl? Then Pick Up a Guitar and Play,” *New York Times*, November 19, 2006.

⁶² Rock ‘n’ Roll Camp for Girls, “Girls Rock Camp Alliance,” Supporters, <http://www.girlsrockcamp.org/supporters/grca> (accessed September 10, 2007); “History,” About Us, <http://www.girlsrockcamp.org/about/history> (accessed September 10, 2007).

RnRC4G is a 501(c)3 non-profit that builds girls' self-esteem, creates leadership opportunities, cultivates a supportive community of peers and mentors, and encourages social change and the development of life skills by providing workshops and technical training in music creation and performance.⁶³ The RnRC4G began by providing a weeklong summer camp in August 2001 on the campus of Portland State University.⁶⁴ The summer day camp is open to girls between the ages of 8 and 18 who want to learn guitar, drums, keyboards, bass, vocals, or DJing. During the course of the week, campers receive instrument instruction; have the opportunity to see a live band each day during lunch; attend workshops on women in music, zine writing, screenprinting t-shirts, self-defense, stage presence, body image, and other topics; form a band; write a song; and perform in a showcase at the end of the week. The campers need not have any prior musical experience. They must, however, apply to the summer camp, which now offers three sessions. Tuition costs \$350 with limited financial aid available, and applicants are admitted on a first come, first served, space permitting basis.⁶⁵

⁶³ Rock 'n' Roll Camp for Girls, "Mission," About Us, <http://www.girlsrockcamp.org/about/mission> (accessed September 10, 2007).

⁶⁴ Rock 'n' Roll Camp for Girls, "History," About Us, <http://www.girlsrockcamp.org/about/history> (accessed September 10, 2007).

⁶⁵ Rock 'n' Roll Camp for Girls, "Summer Camp," Programs, <http://www.girlsrockcamp.org/programs/summer-camp> (accessed September 10, 2007).

The success of the summer camp sessions led RnRC4G to open the Girls Rock Institute (GRI) in 2003. GRI is an after-school program that provides instrument instruction; band coaching, which includes help writing songs, learning equipment, recording, booking shows, and making merchandise; private lessons; and practice space to girls ages 8-18. Private lessons are open to girls as young as 6, and practice space is available to bands with a majority of female members. The most popular offering of the GRI is the Rock Block, which offers participants an hour of instrument instruction followed by an hour of band practice. The Rock Block is offered in 10-week terms in the Fall, Spring, and Winter, and as with the summer camp, Rock Block culminates in an end of term showcase. GRI also offers a summer sampler program where girls can drop in for classes on music theory, instrument instruction, button making, songwriting, equipment, and stage presence.⁶⁶

RnRC4G has also expanded to offer a program on hip hop and a Ladies Rock Camp (LRC) as well as a record label. The Hip Hop Elements program operates in the same manner as the Rock Block, offering 10-week sessions in the Spring, Summer, and Fall to girls ages 8-18. Participants learn about hip hop culture, breakdancing, beat making, DJing, and MCing.⁶⁷ bob e. sox, a long-time RnRC4G

⁶⁶ Rock 'n' Roll Camp for Girls, "Girls Rock Institute," Programs, <http://www.girlsrockcamp.org/programs/girls-rock-institute> (accessed September 10, 2007).

⁶⁷ Rock 'n' Roll Camp for Girls, "Hip Hop Elements," Programs, <http://www.girlsrockcamp.org/programs/hip-hop-elements> (accessed September 10, 2007).

volunteer, established 16 Records in order to distribute music created by queer and/or female musicians in the Pacific Northwest. As a part of the RnRC4G, 16 Records offers girls the chance to learn the business of recording, producing, distributing, and marketing their music.⁶⁸ RnRC4G held the first Ladies Rock Camp in 2004.⁶⁹ LRC provides women ages 19 and over with the summer rock camp experiences that were not available to them as girls. The weekend day camp is a condensed version of the girls camp and offers instrument instruction, workshops, and an end of camp showcase to its participants. It also provides women with the opportunity to have fun, create music, and meet likeminded individuals while raising money to fund financial aid for the girls summer camp program.⁷⁰

Since RnRC4G held its first summer camp in 2001, volunteers inspired by what was happening in Portland have started similar non-profit organizations across North America and in Europe. Girls can now attend camps and after-school programs in New York City; Chicago, Illinois; Memphis and Murfreesboro, Tennessee; Austin, Texas; Philadelphia, Pennsylvania; North Carolina; California's Bay Area; Victoria, British Columbia; Calgary and Edmonton, Alberta; the United Kingdom; and

⁶⁸ Rock 'n' Roll Camp for Girls, "16 Records," About Us, <http://www.girlsrockcamp.org/about/16-records> (accessed September 10, 2007).

⁶⁹ Rock 'n' Roll Camp for Girls, "History."

⁷⁰ Rock 'n' Roll Camp for Girls, "Ladies Rock Camp," Programs, <http://www.girlsrockcamp.org/programs/ladies-rock-camp> (accessed September 10, 2007).

Sweden. The ages of the girls served by the camps vary somewhere in the range of 8-18, tuition runs anywhere from \$250-\$500 a session with financial aid offered by some programs, and sessions last anywhere from five days to one week.⁷¹ The missions and values of the camps, however, remain the same. While referred to as “rock” camps, girls can choose to play any genre of music. The point of these programs is not just to teach girls how to play rock ‘n’ roll; it is to empower girls, build self-esteem, and provide them access to equipment and instruction that has previously been denied them due to their gender and/or socioeconomic background. As summed up in the mission of the Willie Mae Rock Camp in New York City, “We want to encourage them to explore the openness and freedom and fighting spirit of homemade music, and make it their own. And we want them to carry that feeling with them in whatever they do.”⁷²

⁷¹ Bay Area Girls Rock Camp, <http://www.bayareagirlsrockcamp.org> (accessed September 10, 2007); Girls Rock Camp Austin, <http://www.girlsrockcampaustin.com> (accessed September 10, 2007); Girls Rock! Chicago, <http://www.girlsrockchicago.org> (accessed September 10, 2007); Girls Rock Philly, <http://www.girlsrockphilly.org> (accessed September 10, 2007); Southern Girls Rock & Roll Camp, <http://www.sgrrc.org> (accessed September 10, 2007); Willie Mae Rock Camp for Girls, <http://www.williemarockcamp.org> (accessed September 10, 2007).

⁷² Willie Mae Rock Camp for Girls, “Mission and History,” About Us, <http://www.williemarockcamp.org/about.html> (accessed September 10, 2007).

What's Design Got to Do with It?

The most visible recent efforts to increase the number of female electric guitarists, however, tend to focus on the design of the instrument rather than its meaning in popular culture. Sociologist Mavis Bayton argued that manufacturers have traditionally designed guitars for the male body and have not taken into account the fact that women have breasts.⁷³ Manufacturers, such as Fender and Gibson, have recently released models geared toward women with thinner, more lightweight bodies and thinner necks than standard models.⁷⁴ In January 2006, Gibson announced the release of the SG Goddess and Les Paul Vixen, which were versions of the standard SG and Les Paul models, respectively, updated to appeal to women. The updates included lighter bodies, thinner necks, and availability in colors such as coral.⁷⁵

Recently, women have entered the guitar market with designs intended to encourage girls to play the electric guitar. Luna Guitars, founded by Yvonne de Villiers, is one such manufacturer. Yvonne de Villiers worked as a stained-glass artist before starting Luna Guitars. Her inspiration for the line of instruments came from years of watching her mother, an electric bass player, struggle with her heavy

⁷³ Mavis Bayton, "Women and the Electric Guitar," in *Sexing the Groove: Popular Music and Gender*, ed. Sheila Whiteley (New York: Routledge, 1997), 45.

⁷⁴ Strohm, 198.

⁷⁵ Gibson Guitar Corporation, "Gibson USA Presents 15 New Guitars for 2006," January 17, 2006, http://www.gibson.com/absolutenm/templates/_gibsonnews/template.aspx?articleid=783&zoneid=2 (accessed April 17, 2006).

instrument. Although the website for Luna Guitars claimed that the company markets their instruments to males and females of all ages, the feminine is emphasized throughout the site, particularly in the descriptions of instrument models featuring slender necks, smaller headstocks, lightweight bodies, and finishes inspired by stained glass.⁷⁶

Daisy Rock, on the other hand, is a more prominent company that manufactures guitars for female players. Tish Ciravolo, an electric bass player and mother of two girls, founded the company in 2000 in a self-described attempt to “level the playing field” for female guitarists. In the company’s mission statement, Ciravolo argued that standard guitar bodies do not fit the female form. She argued further that the awkwardness of playing a bulky instrument leads female musicians to believe that they should not play the guitar. In addition to lightweight bodies and slim necks designed for smaller hands, Daisy Rock guitars feature bodies contoured to fit the female form.⁷⁷

⁷⁶ Luna Guitars, “FAQs,” About, <http://www.lunaguitars.com/faqs.htm> (accessed March 4, 2006); “History,” About, <http://www.lunaguitars.com/about.htm> (accessed March 4, 2006); “Mission,” About, <http://www.lunaguitars.com/mission.htm> (accessed March 4, 2006).

⁷⁷ Daisy Rock Guitars, “FAQ,” <http://www.daisyrock.com/faq.htm> (accessed March 4, 2006); “Mission,” Press/News, <http://www.daisyrock.com/news/mission.htm> (accessed March 4, 2006); “Tish Ciravolo,” Press/News, http://www.daisyrock.com/news/tish_ciravolo.htm (accessed March 4, 2006).

While on the surface, Daisy Rock appears to be making progress by encouraging girls as young as six to play the electric guitar, I believe many of the company's attempts are misguided and short-sighted and serve to reinforce traditional gender roles. For example, the company produces bodies shaped like hearts, flowers, butterflies, and stars. A guitar with a more traditionally shaped body bears the model name Tom Boy. Additionally, Daisy Rock's guitars come in shades of pink, purple, blue, and yellow and often feature a glittery finish. Such innovations seem to imply that the real barrier to preventing more females from becoming guitarists stems from the instrument's lack of frilliness. Even Gibson's new models mentioned earlier reflect the idea that the way to eliminate barriers between women and electric guitars is through a pastel paint job. While Daisy Rock's guitars may capitalize on the idea that girls do not have to give up their femininity to play electric guitars, focus on the instrument's design only distracts from the real issue. The company's designs reinforce traditional gender roles by defining femininity through a narrow range of shapes and colors and by labeling those female musicians who prefer traditional guitar designs as more masculine than the rest of Daisy Rock's customers. Ciravolo has also published two books on guitar method for girls and a book on bass method for girls.⁷⁸ Gender specific instructional books perpetuate the idea that boys and girls differ fundamentally in their musical aptitude. The design argument for the absence

⁷⁸ Daisy Rock Guitars, "Tish Ciravolo."

of female electric guitarists falls apart when faced with the example of Prince, a small-framed male guitarist who has no trouble displaying his virtuosity on a Fender Telecaster. The argument misses the point that the solution lies in the cultural history of the technology rather than the technology itself.

CHAPTER 6

CONCLUSION

No technology operates in a context free of cultural values. For this reason, cultural values offer insight into why design and use of the guitar and the electric guitar, in particular, have historically functioned to exclude women. Like most inventions, the electric guitar possesses a long, complex history that cannot be boiled down to one particular design innovation or innovator. The fact that men designed the electric guitar remains too simple an explanation for men's continued dominance over the instrument. The more complete explanation includes phenomena as diverse as the supernatural qualities of electricity, the masculinization of technology, the fall of Eve, the binary opposition of gender, and the rise of hypersexual guitar gods.

In other words, the values that led to the masculinization of technology and the male producer/female consumer dichotomy are entrenched in many facets of American culture. While guitar manufacturers have recently begun to market electric guitars to female musicians, the real barriers preventing female electric guitarists from gaining recognition as credible musicians are the same barriers women face when entering other professions. These barriers include the underlying assumption that women are inferior to men, the tendency to link powerful technologies to

masculinity, and the subsequent tendency to treat women as amateurs in technological fields regardless of their training and talent.

While one can far more easily alter the design of a guitar than alter prevailing cultural values, only the latter will have any lasting effect. Until then, the comparative absence of female electric guitarists serves as a self-fulfilling prophecy, as younger female musicians find themselves with few female role models. Although the number of female electric guitarists continues to grow, in 2004, female musicians counted for a mere 7% of electric guitar sales.¹ While sparkly, pink guitars with bodies shaped like hearts might initially spark the interest of some girls in the electric guitar, the change is merely cosmetic, and, in many ways, reinforces traditional gender roles.

Most likely, women's equality with men will have to come in other areas before it comes to the field of playing the electric guitar. Progress toward gender equality continues to be made by organizations, such as the riot grrrl network and the RnRC4G, that utilize music as a tool for the empowerment of girls. One way to combat the institutions that have deprived women of opportunities due to their gender is to create new, more inclusive institutions that provide space for girls and women to explore and express their identities so that they may ultimately rearticulate girlhood in

¹ David Segal, "No Girls Allowed? In the World of Guitar Boasts, Few Women Let Their Fingers Do the Talking," *Washington Post*, August 22, 2004, <http://www.washingtonpost.com/ac2/wp-dyn/A19175-2004Aug20.html> (accessed March 4, 2006).

their own terms. As English professor Gayle Wald has argued in an essay on popular music, “youth music cultures continue to offer girls important sources of emotional sanctuary and acts as vital outlets for the expression of rage and pleasure, frustration and hope.”² To reiterate Douglas’ previously mentioned argument, adolescent girls should be encouraged no matter how they choose to express their desire to have a voice. In the end, it matters little whether a girl is inspired by the Spice Girls or Kathleen Hanna as long as the empowerment she finds through music is carried with her in other endeavors and enables her to hold onto the definition of femininity she has created for herself.

Femininity, however, cannot be redefined without also redefining masculinity. Children, both male and female, need to be encouraged to develop the tools necessary to critically read media representations of gender. Once people are empowered to accept or reject all or parts of traditional notions of gender, femininity and masculinity will be liberated from the mainstream tendency to confine the terms to a single definition, which will make it difficult to draw lines between behaviors and occupations as either acceptably masculine or feminine. Until then, female electric guitarists would do well to heed Charlie Christian’s advice and continue to play their instruments the way they should be played until they make the rest of the world like it.

² “Just a Girl?” 209.

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